

Registered AD

HZL/CLZS/ENV/33/2021-22/

Date : 24.05.2022

To,

The Deputy Director(S)/Scientist-C
MoEF & CC
Integrated Regional Office,
A-209 & 218, Aranya Bhawan,
Jhalana Institutional Area
Jaipur - 302004

Sub : Six monthly Environmental compliance report.


Ref : Environmental Clearance Letter No. J-11013/29/92-EI, Dated 03.06.83
Environmental Clearance Letter No. 3/29/79//HCT/ENV. Dated 25.08.80

Sir,

Please find enclosed herewith the six-monthly compliance report with reference to above Environmental Clearances for our Pyro Plant and Gosunda Dam CLZS location for period 01.10.2021 to 31.03.2022 with all the enclosures as annexures.

Thanking you,

Yours faithfully,


(T K MEGHWAL) 24/05/22
Sr. Manager (Environment)
Chandaria Lead Zinc Smelter

Encl.: Annexures

SIX MONTHLY POINT WISE COMPLIANCE REPORT FOR GOSUNDA DAM
ENVIRONMENTAL CLEARANCE LETTER No. 3/29/79/HTC/ENV DATED 25.08.80

- 1) Majority of labours engaged by the contractor during the construction phase of dam were locals with residential dwellings in nearby villages, hence there was no requirement of fuel wood supply to villages. No trees were felling in the area.
- 2) The excavated mud of the main dam has been utilized in the construction of rock fill dam at the left flank. The soil for the construction of earthen dam has been taken from various borrow area to a maximum depth of uniformly consequently, there are no holes, irregular surface left in the borrow areas. Due to the almost level surface left, no further restoration required.
- 3) General health condition of the persons in the rehabilitation colonies are very good. Regular monitoring of Water quality stored in dam.
- 4) No deforestation or clear felling was resort to for any construction activity associated with the dam construction.
- 5) Provision for plantation of Gosunda dam area has been taken up in right earnest. Plantation of more than 11,000 numbers of saplings has been done and its subsequent maintenance in all respect. The species chosen are all locally endemic species and are known to register fast growth and good canopy cover.

Note:- a. The height of Gosunda Dam is 422.5 MRL. And have Forest clearance for storage of water up to 422.5 MRL

b. Plantation coming under submergence till 422.5 MRL replaced by Forest Department.

c. No village is coming under submergence.



PYRO PLANT

Environment Compliance Report of Chanderiya Lead Zinc Smelter, Chittorgarh with reference to Environmental Clearance letter No. :- J-11013/29/92-EI dated 3.6.83.

S.N.	CONDITION	COMPLIANCE
1	Transportation of concentrates from mine to the Smelter site should be done in containers or closed trucks to minimize/avoid the entry of metal into environment through spillage, carry over, pilferage etc. trucks used should be washed & cleaned at the centralized place HZL should look in this aspect make proper arrangements. This washing should be properly treated & disposed.	<p>(1) Transportation of concentrate from mine is done in covered dampers to minimize any spillage, carry over pilferage etc.</p> <p>(2) The concentrate contains 8% to 10% moisture</p> <p>(3) After unloading, the trucks are washed at the truck washing facility.</p> <p>(4) The wash water is being treated in ETP followed by RO & solids in slurry form are being recycled to the sinter plant and ETP cake is being disposed in SLF.</p> <p>(5) Proper care is being taken during transportation.</p>
2	Spillage & fugitive dust emission at loading and unloading points should be kept to minimum & for this purpose water spray should be adopted.	<p>(1) Moisture in concentrate received at site is maintained at approximately 8%.</p> <p>(2) This minimizes fugitive emission at unloading point & also at the concentrate handling area in RMH.</p> <p>(3) Water sprinkler and vacuum road sweeper are being used at site to reduce & mitigate fugitive dust emission if any at site.</p> <p>(4) We are complying with all applicable norms of fugitive emission.</p>
3	The levels of lead, zinc, and cadmium in the working environment should always be kept within stipulated/well below the standards laid down. If the standards in our country are not available. Standards laid down in US/Canada should be adopted.	<p>(1) Levels of lead and Zinc in the working Environment are within the stipulated limits.</p> <p>(2) Cadmium levels in the working environment have always been found below detection limits.</p> <p>(3) All norms of metal value in the working environment is being followed at site.</p> <p>See Annexure I – Work Environment</p>
4	The local ventilation in all workplaces should be designed in such a way to have a suitable draft circulation.	(1) The stipulated conditions have been taken care of in designing and adequate ventilation system has been provided in work place.



		2) Suitable draft circulation is been maintained.
5	The height & design of the stacks should be such that ground level concentration of the gaseous pollutant should be within the stipulated standards of state board.	(1)The height & design of the stacks are adequate. (2)Ground level concentration of the gaseous pollutant is maintained within the standards issued by State Pollution Control Board.
6	Location & height of the stack on buildings should be such that the turbulence will be on beside of the building . The total meteorological condition should be taken into consideration for this purpose.	(1) In designing the location & height of stack, CPCB guidelines have been followed. (2) During project and after total meteorological condition is being taken into consideration for this purpose.
7	The HZL authorities should make arrangement for regular monitoring of combustion gases, particulate matter & concentration of heavy metals in the particulate size, distribution & deposition of particles on similar type of plants (e.g. Visakhapatnam) in consultation with expert in this field to have an idea & base information. Based on this suitable measure can be adopted & reports should be sent to State/Central Board/ Deptt Of Environment.	(1) HZL authorities have arranged for regular monitoring of combustion gases, particulate matter & concentration of heavy metals in the particulate matter, distribution & deposition of particles on similar type of plants in consultation with expert in this field to have an idea & base information . (2) Based on these suitable measures is been adopted & reports is being regularly sent to State/Central Board/ Deptt Of Environment.
		Annexure – IV Stack Monitoring
8	The liquid effluent emanating from various process operations should be recycled to the maximum possible extent. The effluent should be subjected to rigorous physico-chemical or other suitable treatment method to bring down the pollutant concentration below the standards laid down by State/Central Board.	(1)The daily Average water consumption is approx. 5000 M ³ ./day (2) All effluent treated in ETP followed by RO and MEE. (3)Zero discharge is being effectively maintained at our plant
		Annexure – V Treated water quality analysis
9	The waste treatment plant operation should be watched at Senior Management level & regular reports on its performance and effluents quality should be submitted to state/central authorities.	(1) Regular reports of the analysis of final treated water are submitted to RPCB, Jaipur on quarterly basis. (2) Regular operation is being monitored by Senior or Management officials.
10	The two sludge lagoon should be made imperious to avoid pollution of ground	Three nos. of concrete lagoons with lining have been constructed as per condition.

	ter.	
11	Water quality of river and ground water should be collected at regular intervals to form as the base line data wells in the near by area should be monitored from now onwards & later also.	Water quality of upstream & down stream of Berach river & the sample of wells water from nearby village area is been regularly monitored.
12	The effluent should be used on land to the maximum extent for social forestry purpose & should be a model for others in that area. HZL authorities should explore the possibility of adding treated wastes from town ship to factory wastes to enhance their utility.	<p>Treated water is recycled in the process. Every year new plantation work is taken up, as a result well grown up trees comprise the green belt on both side of the plant.</p> <p>Presently 124 Ha. of green area is been developed inside CLZS Complex which is more than 33% of the Plant area.</p>
13	State authorities be requested to plant trees in the vicinity & surrounding the monuments to enhance the protection & to reduce the wind / sand erosion of monuments.	Free plant saplings are distributed in nearby villages every year and also planted sapling under our CSR activity like Panchayat scheme.
14	Rigorous & stringent measure for maintaining the various process & control equipment in the plant at highest possible standards should be adopted by HZL. If there is a failure of any control equipment these units should not be operated except emergencies.	Stringent measures are taken to keep all the pollution control equipment in good condition. In monthly & annual shutdowns, through checking of pollution control system.
15	An Environmental Management plan stipulating various condition & requirement of operation, maintenance & monitoring should be drawn up. Various levels in the Organisation(s) should be trained to adopt the plans.	EIA study & EMP for CLZS have been prepared. A full fledge Environment Lab exist at site to meet the process and statutory norms. Environmental training is also imparted, and Site Environment Cell is well equipped and trained to adopt the Environment Management Plans at site.
16	Contingency & disaster plans should be drafted for adoption.	Disaster management plan being updated suitably in consultation with Inspector of Factories & Boilers, Jaipur, for the entire location. Site level ERCP is also available at site.
17	Suitable Environmental management & monitoring cell should be created a Sr. Environmental Manager with suitably qualified personnel of various disciplines to undertake the various functions. They	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel already set up under the control of Sr Manager, he will directly to the head of the organization.

	ould be directly reporting to the head of the Organization.	
18	Suitable programs should be organized within the Organization to apprise workers, staff and people in the surroundings regarding value and necessity of good housekeeping and proper environmental management for the welfare of all.	<p>Regular training program are conducted for employees, these program highlight the importance of clean environment and related issues of strict maintaining of process parameters, equipment condition etc.</p> <p>World Environment Day & Van Mahotsav are celebrated every year to create awareness about clean environment & various competitions are also organized.</p>

Registered AD

HZL/CLZS/ENV/33/2021-22/

Date: 24.05.2022

To,

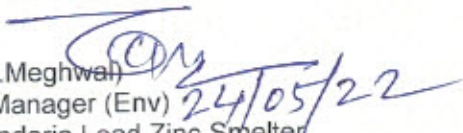
The Deputy Director(S)/Scientist-C
MoEF & CC
Integrated Regional Office,
A-209 & 218, Aranya Bhawan,
Jhalana Institutional Area
Jaipur - 302004

Subject: Six monthly Environmental compliance report.
Ref: Environmental Clearance Letter No. J-11011/17//2005-IAII(I), Date 03.08.2005

Sir,

Please find enclosed the six-monthly compliance report with reference to above Environmental Clearances of Ausmelt Lead Plant CLZS for Period 01.10.2021 to 31.03.2022 with all the enclosures.

Thanking you,
Yours faithfully,


(T.K. Meghwal)
Sr. Manager (Env)
Chanderia Lead Zinc Smelter

Encl.: Annexures

Hindustan Zinc Limited

Sensitivity: Internal (C3)

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Registered Office : Yashad Bhawan, Udaipur (Rajasthan) - 313 004
CIN : L27204RJ1966PLC001208

AUSMELT LEAD PLANT

Environment Compliance Report of Chanderiya Lead Zinc Smelter, Chittorgarh with reference to Environmental Clearance letter No. (No. J-11011/17/2005-IAII(I) dtd. 03/08/05)

CONDITION		STATUS
A. SPECIFIC CONDITIONS		
i.	The gaseous emission from various process units shall conform to the standard prescribed by the concerned authority from time to time .The state Board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location. At no time the emission level should go beyond the prescribed standard in the event of failure of any pollution control system adopted by the unit, the respective unit should not be restarted until the control measures are rectified to achieve the desire efficiency,	<p>(1)The gaseous emission from various process units is being conform to the standard prescribed by the concerned authority from time to time.</p> <p>(2) At no time the emission level is higher than the prescribed standard in the event of failure of any pollution control system adopted by the unit, the respective unit is not restarted until the control measures are rectified to achieve the desire efficiency, Action plan in line for Sox & NOx incase of CPP.</p>
ii.	As reflected in the EIA /EMP, exiting DCDA plant for sulphuric acid plant recovery from SO ₂ shall be upgraded by use of high active catalyst and high efficiency plate heat exchangers. The company shall ensure that SO ₂ emission from the lead smelter plant are taken to existing Sulphuric acid plant properly and converted to H ₂ SO ₄ . The stack from the sulphuric acid plant shall be provided with online stack emission monitoring equipment for continuous monitoring of SO ₂ . As per recommendation made in CREP for environment protection SO ₂ emission limit shall be controlled less than 2 kg/t of H ₂ SO ₄ produced and Acid mist limit of 50 mg/NM ³ shall be achived by 31 Dec.2006.	<p>(1) The SO₂ from Ausmelt going to pyro acid plant mainly. Sometimes it goes to hydro acid plant.</p> <p>(2) In Pyro Plant: Already installed tail gas treatment plant.</p> <ol style="list-style-type: none"> 1. Complying the condition of EC. 2. Acid plant is followed by Tail gas Treatment plant for the always below SO₂ & Mist as per norms. 3. Online Analyzer is working properly and connected to SPCB/CPCB. 4. Using of Very high power catalyst for increase efficiency of conversion. Basically, cesium based V₂O₅ catalyst is being use in Acid Plant. <p>Analysis report of Acid Plant is attached as Annexure VII</p>
iii.	The company shall install continuous air quality monitoring station.one CAAQM shall be set up at Chittorgarh Fort to assess the impact of the lead smelter on the Fort .Data monitored shall be submitted to MOEF and CPCB/RPCB once in six month.	<p>(1)The company has installed continuous air quality monitoring stations.</p> <p>(2).One CAAQM has been set up at Chittorgarh Fort to assess the impact of the lead smelter on the Fort.</p> <p>(3) Data monitored is been submitted to</p>



		MOEF and CPCB/PCB once in six month. Analysis report of CAAQM Station is attached as Annexure X
iv.	<p>Fugitive emissions, acid mist vapours, fumes and SO₂ shall be controlled and work environment monitored for prevailing contaminants regularly.</p> <p>Fugitive dust emissions in the lead concentrate handling area and at various transfer points shall be minimized by provision of dust suppression system. The trucks carrying concentrate shall be fully covered. The Company shall improve overall house keeping by asphaltting the internal roads and to reduce the generation of fugitive dust from vehicle movements.</p>	<p>(1) In order to minimize fugitive emissions Lead Concentrate containing 8-10% moisture is being handled.</p> <p>(2) Provision of water sprinkling at Pb concentrate stock yard has been provided and working satisfactorily.</p> <p>(3) Dust control system has been provided at material transfer points.</p> <p>(4) Mobile Vacuum dust sweeping system on industrial roads and vacuum dust cleaning system for plant area are exist at smelter to control airborne dust due to the vehicles movement.</p> <p>(5) Regular road washing is being done on industrial roads.</p> <p>(6) Truck & truck tyre washing system has been provided and working satisfactorily.</p> <p>(7) All roads are made pucca with cement concrete.</p> <p>Photographs for Road Vacuum Sweeper is attached as Annexure XV</p>
v.	The company shall install fume extractors and bag filters to control the emission from all melting and casting units. The emission shall confirm to the prescribed standards of 50 mg/Nm ³ . The particulate emission from captive power plant should be controlled by installation of ESP and controlled with in the stipulated limits of 50 mg/NM ³ . The low NOX burners shall be installed to control the NOX emission	All pollution control equipment installed properly and operated regularly. Monitoring of stacks are regularly carried out by our team.
vi.	As reflected in the EIA /Environment Management Plan, discharge of process effluent shall not exceed 19 m ³ /hr. The treated effluent shall conform to the prescribed standard and recycled to maintain zero discharge .Reveres Osmosis plant shall be installed for desalination and reuse to effluent to achieve zero discharge .The rejects from RO Plant shall be evaporated in a solar evaporation pond to be constructed with in smelter premises .	<p>1) Process effluent is well in prescribed limits both qualitatively and quantitatively,</p> <p>2) Zero discharge is being maintained from the premises of the industry.</p> <p>3) Existing RO plant is being operated in order to maximize recycling of treated effluents.</p> <p>4) RO reject is being treated through MVR-MEE & rest evaporated at solar evaporation pond through Mist Evaporators / Foggers.</p>
vii.	The solid waste generated in the form of Slag shall be granulated and sold to cement	(1) The slag generated is granulated and disposed at the specific location in the



	manufacturing and also for use in road construction.	slag storage yard. (2) Slag is being used by Cement Plants & road construction.
viii.	Green belt of adequate width and density in and around the captive power plant shall be developed as per Central pollution Control Board guidelines in 61.12 ha of area in addition to 106ha of existing area already brought under green belt. Around the periphery of plant and township canopy based green belt should be developed.	(1) Green belt of adequate width and density in and around the captive power plant is being developed as per Central pollution Control Board guidelines. More than 171 Hect area maintained as green belt. (2) Canopy based greenbelt is already been developed around periphery of plant and township . (3) Presently more than 33% of the Plant area developed as green belt. Details of green belt as attached as Annexure XIV along with photographs.
B. GENERAL CONDITIONS:		
i.	The project authorities must strictly adhere to the stipulations made by the Rajasthan State Pollution Control Board and the State Government.	Site is strictly following the stipulations made by the Rajasthan State Pollution Control Board and the State Government.
ii.	No expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.	No expansion or modifications in the plant is being carried out without prior approval of the Ministry of Environment and Forests.
iii.	Adequate number of ambient air quality-monitoring stations shall be established in the downward direction as well as where maximum ground level concentration of SPM, SO ₂ and NO _x are anticipated in consultation with the Rajasthan State Pollution Control Board. Data on ambient air quality and stack emission should be regularly submitted to this Ministry including its Regional Office at Lucknow and the State Pollution Control Board/Central Pollution Control Board once in six months.	(1) Adequate number of ambient air quality-monitoring stations already established in the downward direction as well as where maximum ground level concentration of SPM, SO ₂ and NO _x are anticipated in consultation with the Rajasthan State Pollution Control Board. (2) Data on ambient air quality and stack emission is being regularly submitted to this Ministry including its Regional Office at Jaipur and the State Pollution Control Board/Central Pollution Control Board once in six months.
iv.	Industrial waste water should be properly collected treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 th May 1993 and 31 st December, 1993 or as amended form time to time. The treated wastewater should be recycled in the plant as well as utilization for plantation purposes.	(1) Industrial waste water is being properly collected and treated is in ETP to to conform to the standards prescribed under GSR 422 (E) dated 19 th May 1993 and 31 st December, 1993 or as amended form time to time. (2)The treated wastewater s recycled in the plant as well as utilization for plant.
v.	The project authorities must strictly comply with the rules and regulations with regard to handling and disposal of hazardous wastes in accordance with the Hazardous Wastes (Management and Handling) Rules 2003.	(1) CLZS strictly complied with the rules and regulations with regard to handling and disposal of hazardous wastes in accordance with the Hazardous Wastes (Management and Handling) Rules 2003.



	Authorization from the State Pollution Control Board must be obtained for collection, storage, treatment and disposal of hazardous wastes.	(2) Authorization from the State Pollution Control Board is being obtained for collection, storage, treatment and disposal of hazardous wastes.
vi.	The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including Silencers, enclosures etc on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (day time) and 70 dBA (nighttime).	The overall noise levels in and around the plant area always below within the standards (85 dBA) by providing noise control measures including Silencers, enclosures etc on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (day time) and 70 dBA (nighttime). Analysis report of Noise Station is attached as Annexure IX
vii.	Occupational Health Surveillance of the workers Shall be done on a regular basis and records maintained as per the Factories Act.	Occupational Health Surveillance of the workers Shall be done on a regular basis and records maintained as per the Factories Act.
viii.	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP/risk analysis and DMP report.	All the pollutions measures are in place along with the proper enforcement of instruments/ PPEs
ix.	The project authorities will provide adequate funds both recurring and non-recurring to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so provided should not be directed for any other purposes.	The Plant authorities provided adequate funds both recurring and non-recurring to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so provided is not directed for any other purposes.
x.	The Regional Office of this Ministry at Lucknow/Central Pollution Control Board/State Pollution control Board will monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation should be submitted to them regularly.	The Regional Office of this Ministry at Jaipur/Central Pollution Control Board/State Pollution control Board is being regularly monitored the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation is being submitted to Regional SPCCB regularly.
xi.	The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the State Pollution Control Board/Committee and may also be seen at Website of the Ministry of Environment and Forests at http://envfor.nic.in . This should be advertised within seven days from the date of issue of the clearance letter at least in two local newspapers that are widely circulated in the	The Plant was already informed the public that the project is the accorded environmental clearance by the Ministry and copies of the clearance letter are available with the State Pollution Control Board/Committee and may also be seen at Website of the Ministry of Environment and Forests at http://envfor.nic.in . Our company advertised within seven days from the date of issue of the clearance letter at least in two local newspapers that are

	region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional Office.	widely circulated in the region of which one is being in the vernacular language of the locality concerned and a copy of the same was forwarded to the Regional Office.
xii.	The project Authority shall inform the RO as well as MOEF the date of financial closures and final approval of the project by the concerned authority and the date of commencing and land development work.	Agreed and informed to RO & MoEF for all the details of plant activities.



Registered AD

HZL/CLZS/ENV/33/2021-22/

Date: 24.05.2022

To,

The Deputy Director(S)/Scientist-C
MoEF & CC
Integrated Regional Office,
A-209 & 218, Aranya Bhawan
Jhalana Institutional Area,
Jaipur - 302004

Subject: Six monthly Environmental compliance report.

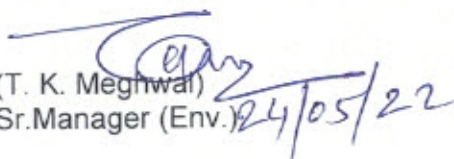
Ref: Environment Clearance Letter No. J-11011/279/2006-I A II (I), Dated 05.10.2015

Sir,

Please find enclosed herewith the six-monthly compliance report with reference to above Environmental Clearances of Fumer Plant for Period 01.11.2021 to 31.03.2022 with all the enclosures as annexures.

Thanking you,

Yours faithfully,


(T. K. Meghwal)
Sr. Manager (Env.) 24/05/22

Enclosures: Annexures

Hindustan Zinc Limited

Sensitivity: Internal (C3)

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CIN : L27204RJ1966PLC001208

FUMER PLANT

Environment Compliance Report of Chanderiya Lead Zinc Smelter, Chittorgarh with reference to Inclusion of Fumer Plant (Pyro metallurgical Process) within the existing Zinc Smelter (2,50,000 TPA) and CPP (100MW) plant to convert Jarosite to slag At Village- Putholi, District, Chittorgarh, Rajasthan by M/s Hindustan Zinc Ltd.

The Ministry of Environment, Forest and Climate Change (MoEF & CC) on recommendations of the EAC (I), decided to grant Environmental Clearance to Include Fumer Plant to convert Jarosite to slag under provisions of EIA Notification dated 14th September 2006, subject to strict compliance of the following Specific and General conditions:

A.	Specific Conditions	Status
i	The project proponent should install 24x7 air monitoring devices to monitor air emission as provided by CPCB and submit report to Ministry and its Regional Office.	1) We have total 4 CAAQM station installed at up wind and down wind direction of plant. 2) One at archaeological important location Chittorgarh Fort. 3) Operation of all instrument are as per CPCB Guidelines. Reports are regularly sent to statutory authority.
ii	The Committee observed that the piezometer samples have shown very high sulphate content upto 3158 mg/l. this indicate seepage of leachate from the jarofix in the landfill. This needs to be investigated and an action plan for remedial action needs to be submitted to the ministry within 6 months.	Ground water analysis & study done by external agency, no seepage observed from land fill, Further actions are under implementation for preventive measures like scientific capping of Landfills. Rainwater harvesting etc.
iii	All the slag from the Fumer plant should be utilized in the cement plant.	Agreed, agreement between cement plant and HZL for Fumer plant slag, dully sign by both parties.
iv	All the existing jarofix landfill site should be scientifically capped as per CPCB guideline	1) We have already covered exhausted Jarofix disposal yard with HDPE liner 2) Current and active site is also being covered with HDPE liner regularly Work in progress for scientifically capping as per guide line.
V	The PP should install piezometer on the northern side of the new landfill site.	Complied, installed as per guidelines.
B.	General Conditions	Status
i	The project authorities must strictly adhere to the stipulations made by the RSPCB and GoR	We are committed & Agreed
ii	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF & CC)	No further expansion or modifications in the plant is being carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF & CC)
iii	At least four ambient air quality monitoring stations should be established in the downward direction as well as here maximum ground level concentration of PM ₁₀ , PM _{2.5} , SO ₂ and NO _x are anticipated in consultation with the SPCB. Data on ambient air quality	1) Four ambient air quality monitoring stations established, Six monthly report regularly submitted to CPCB/RSPCB/ MoEF & CC. 2) All stack are attached with online monitoring system and on line data transmitted to CPCB/RSPCB servers.



	1 stack emission shall be regularly submitted to this Ministry including its Regional Office at Luck now and the SPCB/CPCB once in six months.	
iv	Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 th May, 1993 and 31 st December, 1993 or as amended from time to time. The treated wastewater shall be utilized for plantation purpose.	Industrial wastewater is properly collected, treated at ETP followed by RO & MEE. The treated wastewater is utilized for Process purpose.
v	The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (night time).	1) The overall noise levels in and around the plant area kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. 2) The ambient noise levels always within the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (night time).
vi	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Occupational health surveillance of the workers are carried out on a regular basis and records maintained as per the Factories Act.
vii	The company shall develop rain water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.	(1) The company has developed rain water harvesting system in colony (Zinc Nagar) with Cost around 16.0 lac (2) No. of Anicut developed through our CSR activity for the recharging of ground water and also recharged the abandoned well in the near by villages.
viii	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.	(1) Complied, all the environmental protection measures and safeguards recommended in the EIA/EMP report. (2) We have also under taken socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.
ix	Requisite funds shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change (MoEFCC) as well as the State Government. An implementation schedule for implementing all the conditions stipulated herein shall be submitted to the Regional Office of the Ministry at Lucknow. The funds so provided shall not be diverted for any other purpose.	(1) Requisite funds allotted towards capital cost and recurring cost/annum for environment pollution control measures to comply the stipulated conditions. Ministry of Environment, Forest and Climate Change (MoEFCC) as well as the State Government. (2) An implementation schedule for implementing all the conditions stipulated is submitted to the Regional Office of the Ministry at Jaipur, funds so provided shall not be diverted for any other purpose.

x	Copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad/Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.	(1) Complied, EC letter already sent to concerned Panchayat, Zila Parishad /Municipal Corporation, Urban Local Body etc. (2) EC letter also put on Web site.
xi	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MoEFCC at Lucknow. The respective Zonal Off of CPCB and the SPCB. The criteria pollutant levels namely; PM ₁₀ , SO ₂ , NO _x , (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain	Shall be complied after commissioning of the Fumer plant which is under process. Consent to Operate received from SPCB Jaipur.
xii	The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MOEFCC, the respective Zonal Office of CPCB and the SPCB. The regional Office of this Ministry at Lucknow / CPCB/SPCB shall monitor the stipulated conditions.	Six monthly compliance reports regularly sent to all the concerned regulatory authorities for existing operations, We will send as per requirement for Fumer plant also after commissioning.
xiii	The environmental statement for each financial year ending 31 st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective Regional Office of the MOEFCC at Lucknow by e-mail.	The environmental statement for each financial year ending 31 st March in Form-V. Regularly submitted to RSPCB Jaipur and RO office Chittorgarh. New requirement for the Fumer plant will be complied after commissioning of the plant.
xiv	The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website fo the Ministry of Environment,	(1) Informed to all concerned. (2) Already, Advertised in two local newspapers that are widely circulated in the region of which one was in the vernacular language of the locality concerned.

	<p>ests and Climate Change (MoEFCC) as http://envfor.nic.in. this shall be advertised within seven days form the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional office at Lucknow</p>	
xv	<p>Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.</p>	<p>Shall be complied, Commissioning of plant yet to be done.</p>
8	<p>The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.</p>	<p>Noted and agreed</p>
9	<p>The Ministry reserves the right to stipulate additional conditions if found necessary. The company in a time bound manner shall implement these conditions.</p>	<p>Noted and agreed</p>
10	<p>The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous Waste (Management, Handling and Trans boundary Movement) Rules, 2008 and the Public (Insurance) Liability Act, 1991 along with their amendments and rules.</p>	<p>Noted and shall be complied.</p>



Registered AD

HZL/CLZS/ENV/33/2021-22/

Date: 24.05.2022

To,

The Deputy Director(S)/Scientist-C
MoEF & CC
Integrated Regional Office,
A-209 & 218, Aranya Bhawan,
Jhalana Institutional Area
Jaipur - 302004

Sub: Six monthly Environmental compliance report.


Ref: Environmental Clearance Letter No. F.No.J-11011/158/2003-IAII(I) Dated :31.03.2004
Environmental Clearance Letter No. F.No.J-11011/279/2006-IAII(I) Dated :06.12.2006
Environmental Clearance Letter No. F.No.J-11011/279/2006-IA.II(I) Dated:14.10.2020

Sir,

Please find enclosed herewith the six monthly compliance report with reference to above Environmental Clearances of Hydro Plant of CLZS for Period 01.10.2021 to 31.03.2022 with all the enclosures.

Thanking you,

Yours faithfully,


(T. K. Meghwal)
Sr. Manager (Env) 24/05/22
Chandaria Lead Zinc Smelter

Enclosures: Annexures

Hindustan Zinc Limited

Chandaria Lead Zinc Smelter P.O. Putholi, Chittorgarh (Rajasthan) - 312 021
T +91-1472 254 017 F +91-1472 253 016 www.hzindia.com

Registered Office : Yashad Bhawan, Udaipur (Rajasthan) - 313 004
CIN : L27204RJ1966PLC001208

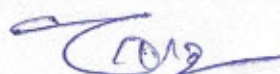
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HYDRO 1 PLANT & 154 MW CPP

Environment Compliance Report of Chanderiya Lead Zinc Smelter, Chittorgarh with reference to Environmental Clearance letter No. J-11011/158/2003-IAII(I) dtd. 31/03/04) for Zn SMELTER & CPP 154 MW

CONDITION		STATUS
A. SPECIFIC CONDITIONS		
i	The gaseous emissions from various process units should confirm to the standards prescribed by the concerned authorities from time to time. The state board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location. At no time the emissions level should go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit should not be restarted until the control measures are rectified to achieve the desired efficiency.	<p>1) Pollution control systems are interlocked with process; and it is being ensured that emission levels are well below prescribed limit at any time.</p> <p>2) Process is interlocked with pollution control measure.</p> <p>3) The respective unit should not be restarted until the control measures was rectified to achieve the desired efficiency.</p>
ii	As reflected in the EIA/EMP, Double Contact Double adsorption (DCDA) plant for sulphuric acid recovery from SO ₂ should be set up. The stack from the sulphuric acid plant should be provided with online stack emission monitoring equipment for continuous monitoring of SO ₂ . As per the recommendations made in charts for corporate responsibility for environment protection, SO ₂ emission limit should be controlled less than 2 kg/tonne of H ₂ SO ₄ produced and acid mist limit of 50 mg/m ³ should be achieved by December 2006. Continuous monitoring of SO ₂ should be carried out.	<p>1) The Double conversion Double absorption Sulphuric Acid Plant has commissioned and meeting Sulphur di-oxide as per norms.</p> <p>2) Continuous monitoring system for SO₂ monitoring has already been installed and is being operational.</p> <p>3) Very effective catalyst cesium based V₂O₅ is used for better conversion.</p> <p>4) More than 100 mts tall stack was installed.</p> <p>Monitoring result of Acid Plant are attached as Annexure VII</p>
iii	Fugitive emissions, acid mist vapours, fumes and SO ₂ should be controlled and work environment monitored for prevailing contaminants regularly. Fugitive dust emissions in the zinc concentrate handling area and at various transfer points should be minimized by provision of water sprinkling system. The company should improve overall house keeping by asphaltting the internal roads and to reduce the generation of fugitive dust from vehicle movements.	<p>1) In order to minimize fugitive emissions Zn Concentrate containing 8-10% moisture is being handled.</p> <p>2) Provision of water sprinkling at Zn concentrate stock yard has been provided and working satisfactorily.</p> <p>3) Dust control system has been provided at material transfer points.</p> <p>4) Mobile Vacuum dust sweeping system on industrial roads and</p>

		<p>vacuum dust cleaning system for plant area are exist at smelter to control airborne dust due to the vehicles movement.</p> <p>5) Regular road washing is being done on industrial roads.</p> <p>6) Truck & tyre washing system has been provided and working satisfactorily.</p> <p>7) All roads are pakka and concreted</p> <p>Photographs for Road Vacuum Sweeper is attached as Annexure XV</p>
iv	<p>The company should install fume extractors and bag filters to control the emissions from all melting and casting units. The emissions shall conform to the prescribed standards of 50 mg/Nm³. The particulate emissions from the captive power plant should be controlled by installation of ESP and controlled within the stipulated limits of 50 mg/Nm³. The low NO_x burners should be installed to control the NO_x emissions.</p>	<p>1) Bag filters with PTFE bags have been provided in order to meet out the prescribed norms.</p> <p>2) High efficiency ESP and low NO_x burners have been provided at Power Plant to control emissions from plant and meeting the stipulated limits.</p>
v	<p>As reflected in the EIA /Environmental Management plan, discharge of process effluent shall not exceed 139 m³/hr. The treated effluent should confirm the prescribed standards and recycled to maintain the zero discharge. Reverse Osmosis plant should be installed for treatment of surplus effluent for reuse in the process to achieve zero discharge. The rejects from the RO plant should be evaporated in a solar evaporation pond to be constructed within smelter premises.</p>	<p>1) Process effluents are with in prescribed limits both qualitatively and quantitatively.</p> <p>2) Zero discharge is being maintained from the premises of the industry.</p> <p>3) Existing RO plants is being operational in order to maximize recycling of treated effluents.</p> <p>4) MEE Installation is already completed in 2021</p>
vi	<p>The solid/hazardous waste/sludge generated from the process units should be disposed off in a secured double lined landfill with leachate collection and leak detection system. As reflected in EIA /EMP report, the Jarosite should be stabilized to jarofix by application of technology obtained from M/s Canadian Electrolyte Zinc Limited. The landfill should be constructed at a safe height from the highest water table; The design of the land should be approved by SPCB as per Hazardous Wastes</p>	<p>1) Jarosite is stabilized with lime and Cement into Jarofix and disposed to lined Jarofix disposal yard in systematic way.</p> <p>2) Design is approved from RSPCB and CPCB guidelines.</p> <p>3) Anode mud is being recycled back in to the process. Surplus, if any is being disposed into SLF after stabilization.</p>



	<p>(Management and handling) Rules, 2003. Ground water quality in the vicinity of the landfill should be regularly monitored by construction of Piezometers. The efforts should be made to self spent to the authorized reproprocesses. The anode mud should be recycled in the leaching plant. The ash generated from the captive power plant should be provided to the cement manufacturing unit. The surplus quantity if any, should be disposed off in the ash disposal area by dry disposal method. The Piezometers should be constructed around the ash disposal area to monitor the ground water quality.</p>	<p>4) Fly Ash generated from Power Plant is being given to Cement plants,</p> <p>5) Bottom ash is also being disposed to brick manufacturers.</p> <p>6) Piezo wells Have been installed at down/ up stream of Secured land Fill, Jarofix Yard. Monitoring of the Piezometer water is being done regularly. Periodically inspection is being carried out by Statutory authority.</p> <p>Monitoring of Piezometer water analysis enclosed as Annexure XI</p>
vii	<p>Green belt of adequate width and density in and around the captive power plant should be developed in consultation with the DFO in 61.12 ha. of area in addition to the existing area already brought under green belt. Around the periphery of plant and township, canopy based green belt should be developed.</p>	<p>1) Green belt of adequate width and density in and around the captive power plant is being developed in consultation with the DFO in 61.12 ha. of area in addition to the existing area already brought under green belt.</p> <p>2) Canopy based greenbelt is already been developed around periphery of plant and township .</p> <p>3) Presently CLZS plant is having more than 33% of the Plant area.</p> <p>4) We are also in process for increasing density of plantation at site.</p> <p>Details of Green Belt are enclosed - Annexure XIV</p>
I	<p>The project authorities must strictly adhere to the stipulation made by the Rajasthan State Pollution Control Board and the State Government.</p>	<p>All the statutory norms prescribed by RSPCB are being met.</p>
li	<p>No expansion or modification in the plant should be carried out without prior approval of the Ministry of Environment and Forests.</p>	<p>No expansion or modification in the plant is being carried out without prior approval of the Ministry of Environment and Forests.</p>
lii	<p>Adequate number of ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of SPM, SO₂, and NO_x are anticipated in consultation with the Rajasthan State Pollution Control Board. Data on ambient air quality and stack emission should be regularly submitted to this Ministry including</p>	<p>(1) Adequate number of ambient air quality monitoring stations was established in the downward direction as well as where maximum ground level concentration of SPM, SO₂, and NO_x are anticipated in consultation with the Rajasthan State Pollution Control Board.</p> <p>(2) Data on ambient air quality and stack</p>

	its Regional Office at Lucknow and the State Pollution Control Board/Central Pollution Control Board once in six months.	emission is being regularly submitted to this Ministry including its Regional Office at Jaipur and the State Pollution Control Board/Central Pollution Control Board once in six months. Details of Ambient Air Quality enclosed -Annexure VIII Details of Stack Monitoring is enclosed as -Annexure IV
iv	Industrial waste water should be properly collected treated so as to conform to the standard prescribed under GSR 422 (E) dated 19 th May 1993 and 31 st December 1993 or as amended form time to time. The treated waste water should be recycled in the plant as well as utilization for plantation purposes.	Industrial waste water properly treated in ETP/RO to confirm all the prescribed norms and recycled back in to process plants. Continue to maintain Zero discharge.
v	The project authorities must strictly comply with the rules and regulation with regard to handling and disposal of hazardous wastes in accordance with the Hazardous Wastes (Management and Handling) Rules, 2003. Authorization from the State Pollution Control Board must be obtained for collection, storage, treatment and disposal of hazardous wastes.	(1) All HW activities are carried in accordance with the Hazardous Wastes and other Waste (Management and Handling & Trans boundary) Rules, 2016. (2) Authorization from the State Pollution Control Board is already obtained for collection, storage, treatment and disposal of hazardous wastes.
vi	The overall noise levels in and around the plant area should be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers , enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz 75 dBA (daytime) and 70 dBA (nighttime)	(1)The overall noise levels in and around the plant area is being kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers , enclosures etc. on all sources of noise generation. (2)The ambient noise levels are observed very below to the standards prescribed under EPA Rules, 1989 viz 75 dBA (daytime) and 70 dBA (nighttime) Details of Ambient Noise Monitoring is enclosed as -Annexure IX
vii	Occupational Health Surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.	Being done and records are maintained.
viii	The project proponent shall also comply with all the environmental protection	We are complying all the recommendations of

	measures and safeguards recommended in the EIA/EMP/risk analysis and DMP report.	EIA/EMP/Risk/DMP.
ix	The project authorities will provide adequate funds both recurring and non-recurring to implement the conditions stipulated by the Ministry of Environment and forests as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so provided should not be diverted for any other purposes.	Funds are allocated for capital and revenue expenditures and no fund is diverted to other jobs
x	The Regional Office of this Ministry at Luck now/Central Pollution Control Board/State Pollution Control Board will monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation should be submitted to them regularly.	Last report submitted in the month of Nov 21 while quarterly reports being sent to SPCB regularly and statistical interpretation data submitted to SPCB regularly.
xi	The Project Proponent should inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the State Pollution Control Board/Committee and may also be seen at Website of the Ministry of Environment and Forests at http://envfor.nic.in This should be advertised within seven days from the date of issue of the clearance letter at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional Office.	Condition already complied with. Accordance of EC advertised in two local widely circulated in leading news paper ,copy was already been submitted to your good office.

HYDRO 2 PLANT & 100 MW CPP

Environment Compliance Report of Chanderiya Lead Zinc Smelter, Chittorgarh with reference to Environmental Clearance letter No No. J-11011/279//2006-IA.II(I) DATED, 06.12.2006 for 250,000 TPA Zinc & 100 MW CPP

No	Condition	Compliance Status
1.0	This has reference to your letter No. HZL/CLZS/ENV/MoEF/06/9586 dated 24th July, 2006 along with application, EIA/EMP and related project documents and subsequent clarifications furnished by you vide your letters dated 7 th August, 2006 and 4th September, 2006 for seeking environmental clearance of the above mentioned project under the EIA Notification, 1994.	<ol style="list-style-type: none"> 1) We have obtained Environment Clearance after EIA & Public hearing from MoEF. 2) We are also complying with all conditions imposed by MoEF. 3) We have Strictly followed EIA Notification, 1994.
2.0	The Ministry of Environment and Forests has examined your application. It is noted that the proposal involves expansion of Zinc smelter 2,50,000 TPA (2,10,000 TPA Zinc smelter and 40,000 TPA by de-bottlenecking of existing 1,70,000 TPA Zinc smelter) and Captive Power Plant (100 MW) at Putholi, Gangrar, Chittorgarh, Rajasthan. No additional land will be required since the expansion project will be set up in 26.5 ha out of existing 335.85 ha. land available. Zinc concentrates will be sourced from the captive mines of HZL viz. Rampura Agucha Mines, Rajpura Dariba Mines, Zawar Mine, Sindesar Khurd Mines. Calcine will be sourced from other zinc smelters (captive/imported).	<ol style="list-style-type: none"> 1) All expansion carried out as per EIA Notification. 2) It was set up in 26.5 ha out of existing 335.89 ha. land available. 3) Zinc concentrates is a source from the captive mines of HZL viz. Rampura Agucha Mines, Rajpura Dariba, Kayad Mines, Zawar Mine, Sindesar Khurd Mines and Calcine will be sourced from all zinc smelters (captive/imported)
3.0	Bag filters and ESP will be installed to control dust and air emissions. Total water requirement from Gosunda Dam will be 11,000 m ³ /d and permission accorded by the Govt. of Rajasthan. The effluent will be treated in the ETP followed by Reverse Osmosis. The waste water generated from CPP will be recycled and used for dust suppression in coal and ash handling areas. The RO rejects, ETP sludge, Cobalt cake, cooler cake, anode mud, enrichment cake, and spent catalyst etc. will be sent to existing secured landfill. Waste / used oil will be sold to registered recyclers. Ash will be given to cement / brick manufacturers.	<ol style="list-style-type: none"> 1) Agreed and complied during operation. 2) Process effluents being treated in ETP (175m³/hr) followed by reverse osmosis plant & 3rd stage RO. Zero discharge is being maintained. 3) The effluent generation from the CPP is being recycled and used for dust suppression in coal and ash handling areas. 4) The hazardous wastes generated from the process are stabilized and disposed in the existing secured landfill. 5) Ash is being disposed to cement/brick manufacturers. 6) Waste and used oil is being sold to registered recyclers. <p>ETP Treated water results annexed</p>



		ETP Treated water results annexed as annexure V.
4.0	Public hearing panel has recommended the project in the meeting held on 29 th June, 2006. 'No Objection Certificate' has been accorded by the Rajasthan State Pollution Control Board vide letter No.12 (CII-78) RPCB/G.III/1432 dated 3 rd August, 2006. Total cost of the project is Rs. 970.00 Crores.	<ol style="list-style-type: none"> 1) Our project cleared all steps as EIA notification. 2) Total Project Cost was 970 crore.
5.0	The Ministry of Environment & Forests hereby accords environmental clearance to the above project under the provisions of EIA Notification dated 14 th September, 2006 subject to strict compliance of the following specific and general conditions.	<ol style="list-style-type: none"> 1) Comply all condition imposed in EC letter. 2) Strictly follow EIA notification
A. SPECIFIC CONDITIONS:		
i	The gaseous emissions from various process units shall conform to the standards prescribed by the concerned authorities from time to time. The Rajasthan State Pollution Control Board (RSPCB) may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location. At no time, the emissions level shall go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency.	<ol style="list-style-type: none"> 1) Is Being complied for all relevant standards. 2) Pollution control systems are interlocked with process and it is being ensured that emission levels are well below prescribed limit at any time. 3) In the event of failure of any pollution control system adopted by the unit, the respective unit is being shutdown until the control measures are rectified to achieve the desired efficiency.
ii	The company shall install on-line stack emission monitoring equipments for continuous monitoring of SO ₂ , NO _x , SPM and O ₂ and all the pollution control measures shall be interlocked. The company shall install fume extractors and bag filters to control the emissions from all melting & casting units. Electrostatic precipitators (ESP) in Captive Power Plant (CPP), Gas Cleaning Plant (GCP) and Sulphuric acid plant shall be installed to control dust and SO ₂ emissions within the stipulated limits of 50 mg/Nm ³ . The low NO _x burners shall be installed to control the NO _x emissions.	<ol style="list-style-type: none"> 1) Being complied with all the conditions. 2) Online SO₂ analyzer installed at Sulphuric Acid plant stack. 3) Online analyzers installed in the CPP stack to measure SO₂, NO_x, PM. In CPP, low NO_x burners installed to control the NO_x emissions. <p>Stack Monitoring results annexed as annexure IV</p>
iii	Impact of SO ₂ emissions from H ₂ SO ₄ plant and CPP in ambient air shall be assessed by the project proponent and a detailed report submitted to the Ministry including its Regional Office at Lucknow, CPCB and RSPCB	<ol style="list-style-type: none"> 1) SO₂ is measured in Ambient air through manual monitoring & continuous ambient air monitoring analyzers and report is submitted to MOEF, CPCB & RSPCB. <p>Acid Stack Monitoring results</p>

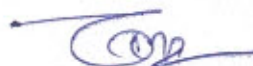
		annexed as annexure VII
iv	All the recommendations made in Charter for Corporate Responsibility for Environment Protection (CREP) shall be strictly followed and SO ₂ emission limit shall be controlled less than 2 kg/ton of H ₂ SO ₄ produced and acid mist limit of 50 mg/Nm ³ shall be achieved by December, 2006.	<p>1) CREP is strictly followed.</p> <p>2) SO₂ emission from acid plant kept within norms.</p>
v	Fugitive emissions, acid mist vapours, fumes and SO ₂ shall be controlled and work environment monitored for prevailing contaminants regularly. Fugitive dust emissions in the handling area and at various transfer points shall be minimized by provision of dust suppression system. Bag filters shall be installed in the Roaster, Calcine handling & storage section, Zinc atomizing unit, Dross milling section to control fugitive emissions. The Company shall improve overall house keeping by asphaltting the internal roads and to reduce the generation of fugitive dust from vehicle movements	<p>1) In order to minimize fugitive emissions, Zn concentrate containing 8-10% moisture is being used.</p> <p>2) Provision of water sprinkling at Zn concentrate stock yard is being provided.</p> <p>3) Dust control system is being provided at material transfer points.</p> <p>4) All the internal roads are concreted to reduce the dust emission.</p> <p>5) Mobile vacuum dust sweeping system on roads and vacuum dust cleaning system for plant area is being provided at smelter to control airborne dust due to the vehicle movements.</p> <p>6) Road washing is beendone on roads.</p>
vi	Total water requirement from Gosunda dam shall not exceed 34,000 m ³ /d as allocated by the Energy Department, Govt. of Rajasthan and water shall also be released from the Gosunda Dam for the use by the public as per the agreement signed. It shall be ensured that irrigation in the surrounding areas is not affected due to non-release of water by HZL. No ground water will be used. As reflected in the EIA/EMP, all the effluent generated shall be treated in the ETP followed by feeding to Reverse Osmosis (RO) plant. The water treated in RO Plant shall be recycled in the process and rejects of RO plant shall be evaporated in solar evaporation pond. The RO rejects and ETP sludge shall be sent to existing secured landfill. The wastewater generated from CPP shall be recycled and used for dust suppression in coal and ash handling areas. The treated effluent shall conform to the prescribed standards and recycled to maintain the zero discharge.	<p>(1) Total water requirement is not exceeding 34000 m³/day for the operation of CLZS location</p> <p>(2) Process effluents being treated in a separate ETP (175m³/hr) followed by reverse osmosis plant (160m³/hr) and 3rd stage RO (42 m³/hr)</p> <p>(3) The quality of the treated water is within the prescribed limits. Zero discharge is being maintained.</p> <p>(4) Multi Effect Evaporator plant installation completed to treat RO Reject</p> <p>(5) The effluent generated from the CPP is used for dust suppression in coal & ash handling areas & rest treated in RO plant.</p>
vii	The solid waste generated in the form of Jarosite shall be stabilized as Jarofix and disposed off in Jarofix disposal yard inside the plant premises. Cobalt	1) Jarosite is being stabilized as Jarofix and then disposed in lined Jarofix disposal yard.

	cake, cooler cake, anode mud, enrichment cake, ETP sludge and spent catalyst etc. shall be disposed off in secured landfill (SLF). Waste/used oil shall be sold to registered recyclers. Ash shall be given to cement / brick manufacturing units.	2) Cooler cake, ETP sludge and spent catalyst etc. is disposed off in captive secured landfill (SLF) after stabilization. 3) Anode mud is being recycled back in to the process. Surplus, if any, disposed in SLF after stabilization. 4) Ash generated from Power Plant is given to Cement plants/brick manufacturing.
viii	Canopy based green belt of adequate width and density in and around the periphery of plant, township and captive power plant in 142 ha. shall be developed as per CPCB guidelines.	Canopy based green belt of adequate width and density in and around the periphery of plant already developed Annexure XIV
B. GENERAL CONDITIONS:		
I	The project authorities must strictly adhere to the stipulations made by the Rajasthan State Pollution Control Board and the State Government.	All the conditions stipulated by RSPCB and state Govt is strictly complied.
ii	No expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.	Modifications or expansion is being done as per EC approval from Ministry of Environment and Forests.
iii	Adequate number of ambient air quality-Monitoring stations shall be established in the downward direction as well as where maximum ground level concentration of SPM, SO ₂ and NO _x are anticipated in consultation with the Rajasthan State Pollution Control Board. Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional Office at Lucknow and the CPCB / RSPCB once in six months.	1) Four Nos. of ambient air quality monitoring stations installed in the plant upward and downward direction, report is being sent to RSPCB. 2) State pollution control board also monitored the same periodically. AAQ Monitoring results annexed as annexure VIII
iv	Industrial waste water shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 th May, 1993 and 31 st December, 1993 or as amended from time to time. The treated wastewater shall be recycled in the plant as well as utilization for plantation purposes.	1) Industrial waste water properly treated to confirm all the prescribed norms and recycled back in to process plants. 2) Continue to maintain Zero discharge.
V	The project authorities must strictly comply with the rules and regulations with regard to handling and disposal of hazardous wastes in accordance with the Hazardous Wastes (Management and Handling) Rules, 2003. Authorization from the	All the conditions of Hazardous waste (management and handling) rules 2003, 2008, 2016 are followed. (2) Hazardous waste authorization is obtained from RSPCB and is valid till

	State Pollution Control Board must be obtained for collection, storage, treatment and disposal of hazardous wastes.	April 2024.
Vi	The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).	Regular monitoring is being done and control measures are being taken.
Vii	Occupational Health Surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Occupational health monitoring is regularly carried out.
Viii	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA / EMP /risk analysis and DMP report.	As per EMP 1) For air emission control- we have installed ESP, bag house, cyclone and gas wash tower for Air emission control. 2) For Effluent management we have integrated water management system in place with ETP, RO and 3 rd stage RO and Multi Effect Evaporator. 3) For Hazardous waste management we have adopted best available technology and have captive secured landfill.
ix	The project authorities shall provide Rs. 111.50 Crores and Rs. 12.00 Crores towards capital cost and recurring cost/annum for environmental pollution control measures to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government and submit an implementation schedule for all the conditions stipulated herein to this Ministry and its Regional Office at Lucknow. The funds so provided shall not be diverted for any other purposes.	All pollution control measures has been installed and checked by RSPCB. (2) Approx. Recurring cost of CLZS was approx Rs 30 Crs to maintain ETP, RO,ESP, Gas cleaning system, Bag houses, and online analyzers etc.
X	The Regional Office of this Ministry at Lucknow, CPCB / RSPCB shall monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation should be submitted to them regularly.	Six monthly Environment clearance compliance report submitted on regular basis to MOEF.
Xi	The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the State Pollution Control Board/ Committee and may also be seen at Website of the	Accordance of Environment clearance advertised in two local newspapers that are widely circulated and a copy of the same is sent to your good office.



	Ministry of Environment and Forests at http://envfor.nic.in . This shall be advertised within seven days from the date of issue of the clearance letter at least in two local newspaper that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the Regional office.	
Xii	The Project Authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	In case of closure, closure plan will be submitted to Ro MOEF
6	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Noted and agreed
7	The Ministry reserves the right to stipulate additional conditions if found necessary. The company in a time bound manner will implement these conditions.	Noted
8	The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Hazardous Wastes (Management and Handling) Rules, 2003 and the Public Liability Insurance Act, 1991 along with their amendments and rules.	Noted



Hydro Plant
Conditions of Environment Clearance
F.No.J-11011/279/2006-IA.II(I)

A	Specific General Conditions	Status
i	The Environment Clearance (EC) granted to the project/activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/construe to approval/consent to approvals/ Permissions etc. required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislations etc. as may be applicable to the project.	We will comply all the condition of environment clearance issued by MoEF and Strictly follow EIA notification and its amendments.
ii	SO ₂ emission from H ₂ SO ₄ plant shall be less than 1 kg/t of Acid production.	SO ₂ emission from acid plant is within limit of 1 kg/ton of H ₂ SO ₄ produced and acid mist 30 mg/Nm ³ , We are achieving by completing following works-- 1.FAT pump circulation from 570 m ³ /hr to 620 m ³ /hr(including crossing) to improve absorption efficiency. 2.IAT pump circulation from 982 m ³ /hr to 1032 m ³ /hr(including crossing) to improve absorption efficiency. 3.FAT & IAT irrigation system with improved design to improve adsorption efficiency. 4.IAT & FAT candle filters with collection efficiency of > 1 micron to 100 % and > 0.5 micron to 96% Further improvement we have planed installation of TGT & action plan for the same submitted.
iii	Acid mist from H ₂ SO ₄ plant shall be less than 30 mg/Nm ³ .	
iv	Particulate matter levels from the stacks shall be less than 30 mg/Nm ³ .	Complying by changing of PTFE bags with less than 30 mg/Nm ³ instead of 50 mg/Nm ³
v	Treated sewage from STP of Chittorgarh/ Bhilwara shall be used in the plant processes.	STP water is being utilized in plant from Chittorgarh city.
vi	Existing ETP shall be strengthened to recycled additional 580 m ³ /d of effluent by installing MEE for RO rejects.	Multi Effect Evaporator installed, and treated water is being used for plant operation
vii	Additional 20 MW power required for the additional load shall be procured from renewable energy sources to reduce GHG emissions. Records of renewable energy purchased shall be maintained and submitted to RO along with EC	We have installed more than 20MW Solar power generating units at DSC & ZM Locations to meet the requirement.



	compliance report		
viii	Plant shall be operated on Zero Liquid Discharge (ZLD)		CLZS plant is maintaining Zero Liquid Discharge.
ix	Additional 100000 trees shall be planted to improve greenery in the plant premises		Phase wise plantation work started & in progress as per plan submitted.
x	Solar energy shall be generated at the roof tops of the plant and office buildings		Solar Power system implemented at Hydro 2 CDSS /Lab building, Hydro 1 leaching office, Switchyard control room building, Zinc School & Boy's Hostel/ Utility Building at Zinc Nagar, Pyro Offices.
xi	RWH and recharge shall be done to recharge 200% of the water consumed annually		We have constructed dam having capacity very large than our requirement. Further we have constructed Ponds/Anicuts for this, Also exploring for more achievements.
xii	All CER projects should be completed within 3 years		Action plan in line
	Area of Intervention	Expenditure Rs. In Lakhs	Total Expenditures is planned and implemented through CSR Total=Rs130Lacs For First Yr=50Lacs [31.12.21] For Second Yr=50Lacs [31.12.22] For Third Year =30Lacs [31.12.23]
	Microenterprise development	50	
	Skilling of local youths	40	
	Drinking water and pipeline	30	
	Plantation of saplings in villages and community land	10	
B	General Conditions		
I	Statutory compliance		
i.	The project proponent shall obtain the necessary permission from the competent authority concerned in case of drawl of surface water required for the project.		Water Source is our Captive source-Gosunda dam and obtained environmental clearance vide letter no. 3/29/79/HTC/ENV Dated 25.08.80.
ii.	The project proponent shall obtain authorization under the Hazardous and Other Waste Management Rules 2016 as amended from time to time.		Hazardous Waste authorization obtained under the Hazardous and Other Waste Management Rules 2016 as amended from time to time.
II	Air quality monitoring and preservation		
i	The project proponent shall install 24X7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time and connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification		Installed 24X7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time and connected to SPCB and CPCB online servers and calibrate these systems from time to

	through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
ii	The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognized under Environment (Protection) Act, 1986.	Fugitive emission monitoring by labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
iii	The Project proponent shall install system to carryout continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM 2.5 in reference to PM emission and SO2 and NOx in reference to SO2 and NOx emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120 degree each), covering upwind and downwind directions	(1) Adequate number of ambient air quality monitoring stations has established in the upward and downward direction as well as where maximum ground level concentration of eg. PM10 and PM2.5 in reference to PM emission and SO2 and NOx in reference to SO2 and NOx emissions. (2) Data of ambient air quality and stack emission is being regularly submitted to this Ministry including its Regional Office at Jaipur and the State Pollution Control Board/Central Pollution Control Board once in six months. Details of Stack Monitoring is enclosed as -Annexure IV Details of Ambient Air Quality enclosed -Annexure VIII
iv	The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and result of manual stacks monitoring and manual monitoring of air quality/fugitive emissions to Regional Office of MoEF & CC, Zonal office of CPCB and Regional Office of SPCB along with six monthly monitoring report.	Report of continuous stack emission, air quality monitoring, manual stack monitoring and manual air quality emission submitted to Regional Office of MoEF & CC, Zonal Office of CPCB and Regional Office to SPCB along with six monthly monitoring report. Details of monitoring report is attached
v	Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.	Bag filter and its differential pressure monitoring in place, periodic inspection is being done to comply prescribed stack emission and fugitive standards.
vi	The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags	Bag filter and differential pressure monitoring in place with periodic inspection system.
vii	Pollution control system in the plant shall be provided as per the CREP guidelines of CPCB	CREP is strictly followed, SO2 emission from acid plant kept within limit of SO2 emission of H2SO4 produced and acid mist
viii	Sufficient number of mobile or stationary vacuum cleaners shall be provided to clean plant roads,	All the internal roads are concreted to reduce the dust emission

	shop floors, roofs, regularly	Mobile vacuum dust sweeping system on road and vacuum dust cleaning system for plant area is being provided at smelter to control airborne dust due to vehicle movements. Regular road washing is being done on roads
ix	Ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation.	transportation is being done in covered manner by wagons and trucks.
x	Provide covered sheds for raw materials like coal, etc.	Raw material & Coal is being stored in covered shed, some coal in open for which shed will be provided
xi	Practice use of low Sulphur tars for baking anodes.	We are not using low sulphur tars for baking anodes.
xii	Ventilation system shall be designed for adequate air changes as per ACGIH document for all tunnels, motors house	Working section are well ventilated. No tunnel present in smelter.
III Water quality monitoring and preservation		
i.	The project proponent shall install 24X7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time and connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	Industry is 100% utilizing its waste water through ETP, RO and MEE and maintained Zero Liquid discharge & no effluent discharge at any stage on the ground.
ii.	Project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent area through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	Ground water quality monitoring is being done and report is being submitted along with six monthly compliance report
iii.	The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six monthly monitoring report.	CLZS plant is maintaining zero liquid Discharge & no effluent discharge at any stage on the ground. Ground water quality is monitored & report is being submitted.
iv.	Sewage treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards	Sewage water is being treated in STP plant and report is attached.
v.	Garland drains and collection pits shall be provided for each stockpile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off	Garland drains available merging to collection pits.
vi.	The project proponent shall make efforts to minimize water consumption in the plant complex	Industry is 100% utilizing its waste water through ETP, RO and MEE.



	by segregation of used water, practicing cascade use and by recycling treated water	
IV	Noise monitoring and prevention	
i	Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional officer of the Ministry as a part of six monthly compliance report	Noise level survey report is done and submitting with six monthly compliance report
ii	The ambient noise levels should conform to the standards prescribed under E(P) A rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.	The ambient noise levels always within the standards prescribed under EPA Rules, 1989 viz. 75 dBA(day time) and 70 dBA(night time)
V	Energy Conservation measures	
i	The Project proponent shall provide waste heat recovery system (Pre heating of combustion air) at the flue gases.	Waste heat recovery system is in place.
ii	Provision of LED Lights	In Offices and residential area LED lights available & also under replacement as per requirement.
VI	Waste management	
i	100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufactures for further utilization and Memorandum of Understanding in this regards shall be submitted to the Ministry's Regional Office.	Presently 100 % utilization is being done and bottom ash is being sold brick manufactures
ii	Oily scum and metallic sludge dB(A) recovered from ETP shall be mixed, rid, and briquetted and reused	No oily scum generated, inorganic ETP sludge is disposed in SLF in scientific manner after stabilization
iii	The waste oil, grease and other hazardous shall be disposed of as per the Hazardous and Other waste (Management & Transboundary Movement) Rule's 2016	Waste and Used oil are being sold to registered recyclers
iv	Kitchen waste shall be composited or converted to biogas for further use	Kitchen waste is being compost through OWC
VI I	Green Belt	
i.	The project proponent shall prepare GHG emissions inventory for the plant and shall submit the program for reduction of the same including carbon sequestration including plantation.	GHG emissions inventory for the plant is being prepared and reduction plan under implementation including plantation.
VI II	Public Hearing and Human health issues	
i.	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented	Emergency preparedness plant is prepared and implemented

i.	The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE)	Heat stress analysis for the workmen is carried out and PPE'S given to workers as per site condition, SOP & nature of work.
iii.	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking mobile toilets, STP, safe drinking water, medical health care, Creche etc. the housing may be in the form of temporary structures to be removed after the completion of the project.	All project related labours are local & from near by area, No stay armament required. We have site facility of medical, safe drinking water, wash/rest house.
iv.	Occupational health surveillance of the workers shall be done on a regular basis and records maintained.	PME is being done of workers on regular basis and record is being maintained
IX	Corporate Environment Responsibility	
i.	The company shall have a well laid down environmental policy dully approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper check and balances and to bring into focus any infringements/deviation/ violation of the environmental/ forest/ wildlife norms/ conditions. The company shall have defined system of reporting infringements /deviation/violation of the environmental/ forest/wildlife norms/conditions and/ orshareholders/stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six mothly report	Company has environment policy dually approved by Board of Director.
ii.	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of Senior Executive, who will directly to the head of the organization	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel already set up under the control of Sr Manager, he will directly to the head of the organization.
iii.	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection CREP for the Aluminium Industry shall be implemented.	CREP is strictly followed SO2 emission from acid plant kept within limit of SO2 emission of H2SO4 produced and acid mist
X	Miscellaneous	
i.	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponents' website permanently.	Environment clearance granted for this project published in two local newspapers of District or state and this EC is displayed in company website permanently.


ii.	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt	Copies of EC submitted to local bodies /panchayat & RSPCB office of Chittorgarh.
iii.	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions including results of monitored data on their website and update the same on half yearly basis .	Compliance of environment clearance conditions including results of monitored data on company website and updated the same on half yearly basis.
iv.	The project proponent shall monitor the criteria pollutants level namely PM10,SO2,NOx(ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.	Ambient levels as well as stack emission is displayed at company outer gate and put on the website of the company along half year compliance report
v.	The project proponent shall submit six monthly report on the status of the compliance of the stimulated environmental conditions on the website of the ministry of Environment Forest and Climate Change at environment clearance portal.	Six monthly Environment Clearance compliance report submitted on regular basis
vi.	The project proponent shall submit the environmental statement for each financial year in Form V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules,1986, as amended subsequently and put on the website of the company	Environment statement for each financial year submitted in Form V to State Pollution Control Board as prescribed under the Environment (Protection) Rules,1986 as amended subsequently.
vii.	The project proponent shall inform the Regional Office as well as the Ministry the date of financial closure and final approval of the project by the concerned authorities commencing the land development work and start of production operation by the project	Consent to Establish and Consent to Operate obtained before start the production operation.
viii.	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government	Strictly adhere to the stipulations made by the State Pollution Control Board and the State Government
ix.	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.	Noted & will comply in all respect.
x.	No further expansion or modification in the plant shall be carried out without prior approval of Ministry of Environment Forests and Climate Change (MoEF&CC)	No further expansion or modifications in the plant is being carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF & CC)
xi.	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action	Agreed and noted.

	under the provisions of environment (Protection) Act, 1986.	
xii.	The Ministry may revoke or suspend the clearance, if implementation of any of the above Condition is not satisfactory.	Agreed, will comply all the conditions
xiii.	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Agreed & will follow where ever required.
xiv.	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation of the officer (S) of the Regional Office by furnishing the requisite data/information/monitoring reports.	Agreed and will support of full cooperation.
xv.	Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under section 16 of the National Green Tribunal Act, 2010.	Agreed and noted.




Annexure - I
HINDUSTAN ZINC LIMITED
CHANDERIA LEAD ZINC SMELTER
Work Zone (8 - Hours) Environment Monitoring Results
(Oct'21 - March'22)

Month Location	Parameters/Unit	Prescribed Standards*	Oct'21	Nov'21	Dec'21	Jan'22	Feb'22	Mar'22
Pyro, CPP, H-1 & H-2 Plant								
Pyro RMH	SPM mg/m3	10	0.600	0.600	0.577	0.666	0.664	0.644
	SO ₂ mg/m3	5	BDL	BDL	BDL	BDL	BDL	BDL
	Zn mg/m3	5	0.130	0.134	0.141	0.160	0.140	0.161
Pyro Sinter Area	SPM mg/m3	10	0.462	0.484	0.484	0.462	0.506	0.462
	SO ₂ mg/m3	5	BDL	BDL	BDL	BDL	BDL	BDL
	Zn mg/m3	5	0.155	0.155	0.161	0.101	0.141	0.188
H -1 Purification Section	SPM mg/m3	10	0.465	0.554	0.487	0.509	0.531	0.554
	SO ₂ mg/m3	5	BDL	BDL	BDL	BDL	BDL	BDL
	Zn mg/m3	5	0.166	0.177	0.161	0.178	0.154	0.091
H - 1 Cell House	SPM mg/m3	10	0.133	0.144	0.166	0.144	0.132	0.149
	SO ₂ mg/m3	5	2.44	2.70	2.48	2.86	3.10	2.24
	Zn mg/m3	5	BDL	BDL	BDL	BDL	BDL	BDL
LRP Casting Area	SPM mg/m3	10	0.571	0.725	0.527	0.681	0.573	0.571
	SO ₂ mg/m3	5	BDL	BDL	BDL	BDL	BDL	BDL
	Pb mg/m3	0.15	0.144	0.154	0.161	0.155	0.180	0.166
LRP K-5 Dross Area	SPM mg/m3	10	0.615	0.527	0.571	0.574	0.615	0.639
	SO ₂ mg/m3	5	BDL	BDL	BDL	BDL	BDL	BDL
	Pb mg/m3	0.15	0.131	0.164	0.155	0.095	0.144	0.155
H-2 Cell House	SPM mg/m3	10	0.128	0.124	0.137	0.110	0.124	0.124
	SO ₂ mg/m3	5	2.64	2.08	2.22	2.24	2.40	2.98
	Zn mg/m3	5	BDL	BDL	BDL	BDL	BDL	BDL
CPP Coal Yard	SPM mg/m3	10	0.398	0.421	0.354	0.354	0.376	0.374
	SO ₂ mg/m3	5	BDL	BDL	BDL	BDL	BDL	BDL
	Zn mg/m3	5	BDL	BDL	BDL	BDL	BDL	BDL


Tarun Kumar Meghwal
Environment Head
Chandaria Lead Zinc Smelter

Annexure - II
HINDUSTAN ZINC LIMITED
CHANDERIA LEAD ZINC SMELTER
Work Zone (15 – Minute) Environment Monitoring Results
(Oct'21 - March'22)

Month Location	Parameters/Unit	Prescribed Standards*	Oct'21	Nov'21	Dec'21	Jan'22	Feb'22	Mar'22
Pyro, CPP, H-1 & H-2 Plant								
Pyro RMH	SPM mg/m3	-	3.76	5.33	4.66	3.33	5.00	6.00
	SO ₂ mg/m3	10	BDL	BDL	BDL	BDL	BDL	BDL
	Zn mg/m3	10	0.05	0.07	0.06	0.04	0.07	0.08
Pyro Sinter Area	SPM mg/m3	-	3.66	3.66	4.33	4.66	5.33	4.33
	SO ₂ mg/m3	10	BDL	BDL	BDL	BDL	BDL	BDL
	Zn mg/m3	10	0.05	0.05	0.05	0.06	0.07	0.05
H -1 Purification Section	SPM mg/m3	-	4.00	3.66	3.66	4.66	4.33	4.00
	SO ₂ mg/m3	10	BDL	BDL	BDL	BDL	BDL	BDL
	Zn mg/m3	10	0.05	0.04	0.04	0.06	0.05	0.05
H - 1 Roster Area	SPM mg/m3	-	4.00	4.66	5.66	4.00	5.33	4.66
	SO ₂ mg/m3	10	BDL	BDL	BDL	BDL	BDL	BDL
	Zn mg/m3	10	0.05	0.06	0.07	0.05	0.07	0.06
LRP Casting Area	SPM mg/m3	-	2.33	4.00	3.66	5.00	3.33	4.66
	SO ₂ mg/m3	10	BDL	BDL	BDL	BDL	BDL	BDL
	Pb mg/m3	-	0.03	0.05	0.05	0.07	0.04	0.06
LRP K-5 Dross Area	SPM mg/m3	-	4.66	5.33	4.00	4.00	5.66	4.00
	SO ₂ mg/m3	10	BDL	BDL	BDL	BDL	BDL	BDL
	Pb mg/m3	-	0.07	0.07	0.05	0.05	0.07	0.05
H-2 Roaster Area	SPM mg/m3	-	4.33	5.33	4.00	4.33	2.33	4.66
	SO ₂ mg/m3	10	BDL	BDL	BDL	BDL	BDL	BDL
	Zn mg/m3	10	0.05	0.07	0.05	0.05	0.02	0.06
CPP Coal Yard	SPM mg/m3	-	3.00	2.33	2.00	4.00	3.00	3.00
	SO ₂ mg/m3	10	BDL	BDL	BDL	BDL	BDL	BDL
	Zn mg/m3	10	BDL	0.01	0.01	0.02	0.01	0.02


Tarun Kumar Meghwal
 Environment Head
 Chanderia Lead Zinc Smelter

Annexure - III
HINDUSTAN ZINC LIMITED
Chandaria Lead Zinc Smelter
STACK HEIGHT

S. No.	Stack Attached to	Height(m)
Ausmelt		
1	Dust Extraction System of feed handling	35
2	Hygeine and Ventilation System	30
3	Ausmelt Furnace	52
4	SO2 Absorption Tower	55
Hydro 1		
1	Zinc Dross Milling Bag Filter	30
2	Zinc Atomizing Bag Filter (Zinc Dust)	30
3	Zinc Melting Furnace Bag Filter (1st stack)	30
4	Zinc Melting Furnace Bag Filter (2nd stack)	30
5	Acid Plant	100
Pyro		
1	Sinter Venturi	45
2	Sinter Main	75
3	Crusher Venturi	75
4	Crusher Bag Filter	75
5	ISF Slagging Floor	75
6	ZRP Fume Extraction	35
7	ZRP Ventilation Stack	75
8	LRP	75
9	Copper Recovery Plant	30
10	Copper Drossing	34
11	TGT (Acid plant)	75
Hydro 2		
1	Zinc Melting Furnace Bag Filter	30
2	Zinc Dross Milling Bag Filter	30
3	Zinc Atomizing Bag Filter (Zinc Dust)	30
4	Acid plant	100
CPP		
1	Captive Power Plant	165
2	Captive Power Plant-Phase-II	165
3	16 MW DG Set	30



Tarun Kumar Meghwal

Environment Head

Chandaria Lead Zinc Smelter


Annexure - IV
HINDUSTAN ZINC LIMITED
Chandaria Lead Zinc Smelter
Stack Monitoring Results (PM & LEAD)
(Oct'21 - March'22)

Location	Parameters	Limit	Unit	Result Oct-Dec'21	Result Jan-Mar'22
Sinter Main	PM	150	Mg/nm3	29.72	28.13
	Lead	10	Mg/nm3	0.95	0.89
Sinter Venturi	PM	150	Mg/nm3	39.15	40.23
	Lead	10	Mg/nm3	0.56	0.59
Crusher Main	PM	150	Mg/nm3	26.80	26.45
	Lead	10	Mg/nm3	4.51	4.66
Crusher Venturi	PM	150	Mg/nm3	11.14	10.78
	Lead	10	Mg/nm3	2.76	2.69
LRP Main	PM	150	Mg/nm3	10.87	9.98
	Lead	10	Mg/nm3	0.45	0.47
ZRP Main	PM	150	Mg/nm3	15.40	17.02
	Lead	10	Mg/nm3	0.85	0.87
ZRP Fume	PM	150	Mg/nm3	20.31	29.76
	Lead	10	Mg/nm3	1.20	1.33


Tarun Kumar Meghwal
 Environment Head
 Chandaria Lead Zinc Smelter

Annexure - IV
HINDUSTAN ZINC LIMITED
Chandaria Lead Zinc Smelter
Stack Monitoring Results (PM & LEAD)
(Oct'21 - March'22)


Location	Parameters	Limit	Unit	Result Oct-Dec'21	Result Jan-Mar'22
LRP Copper Dressing	PM	150	Mg/nm3	15.00	14.67
	Lead	10	Mg/nm3	0.81	0.79
ISF Slagging Floor	PM	150	Mg/nm3	34.01	33.67
	Lead	10	Mg/nm3	3.15	3.19
CRP Milling	PM	150	Mg/nm3	18.11	17.55
	Lead	10	Mg/nm3	0.91	0.89
Ausmelt RMH	PM	150	Mg/nm3	8.33	9.02
	Lead	10	Mg/nm3	0.40	0.45
Ausmelt Hygiene	PM	150	Mg/nm3	7.98	8.65
	Lead	10	Mg/nm3	BDL	BDL


Tarun Kumar Meghwal
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Chandaria Lead Zinc Smelter

Annexure - IV
HINDUSTAN ZINC LIMITED

Chandaria Lead Zinc Smelter
Stack Monitoring Results (PM)
(Oct'21 - March'21)

Location	Parameters	Limit	Unit	Result Oct-Dec'21	Result Jan-Mar'22
H-1 ZMC – 1st	PM	30	Mg/nm3	18.06	16.25
H-1 ZMC - 2nd	PM	30	Mg/nm3	17.03	20.31
H-1 Zinc Dust	PM	30	Mg/nm3	15.12	17.22
H – 1 Zinc Dross	PM	30	Mg/nm3	18.15	14.88
H-2 ZMC	PM	30	Mg/nm3	13.09	12.76
H-2 Zinc Dross	PM	30	Mg/nm3	23.04	19.50
H-2 Zinc Dust	PM	30	Mg/nm3	21.02	20.73
CPP Unit - 1 & 2	PM	50	Mg/nm3	38.77	44.20
CPP Unit – 3	PM	50	Mg/nm3	PUS	40.31
CPP Coal Crusher	PM	50	Mg/nm3	31.00	34.45


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Chandaria Lead Zinc Smelter

Annexure - V
HINDUSTAN ZINC LIMITED

Chandaria Lead Zinc Smelter
Treated Water Monitoring Results
(Oct'21 - March'22)

ETP Outlet – (Hydro – 2)

Parameter	Unit	Limit	Result Oct-Dec'21	Result Jan-Mar'22
pH	-	5.5-9.0	7.36	7.56
Chloride	Mg/l	1000	315.36	305.24
Oil & Grease	Mg/l	10.0	BDL	BDL
Total Residual Chlorine	Mg/l	1.0	BDL	BDL
Ammonical Nitrogen	Mg/l	50.0	2.36	2.58
Nitrate Nitrogen	Mg/l	10.0	1.36	1.58
BOD	Mg/l	30	16.00	15.0
COD	Mg/l	250	49.0	46.0
TSS	Mg/l	100	24.6	26.4
Fluoride	Mg/l	2.0	1.60	1.20
Sulphate	Mg/l	1000	634.25	621.26



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Chandaria Lead Zinc Smelter

Annexure - V
HINDUSTAN ZINC LIMITED
Chandaria Lead Zinc Smelter
Treated Water Monitoring Results
(Oct'21 - March'22)

ETP Outlet – (Hydro – 2)


Parameter	Unit	Limit	Result Oct-Dec'21	Result Jan-Mar'22
Phosphate	Mg/l	5.0	BDL	BDL
Cyanide	Mg/l	0.2	BDL	BDL
Hexavalent Chromium	Mg/l	Not to exceed 0.1	BDL	BDL
Cadmium	Mg/l	2.0	BDL	BDL
Chromium	Mg/l	2.0	BDL	BDL
Copper	Mg/l	3.0	BDL	BDL
Iron as Fe	Mg/l	Not Specified	BDL	BDL
Lead as Pb	Mg/l	0.1	BDL	BDL
Nickel	Mg/l	3.0	BDL	BDL
Zinc	Mg/l	5.00	0.38	0.28


(Tarun Kumar Meghwal)
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Chandaria Lead Zinc Smelter

Annexure - V
HINDUSTAN ZINC LIMITED
Chandaria Lead Zinc Smelter
Treated Water Monitoring Results
(Oct'21 - March'22)

ETP Outlet – (PYRO)

Parameter	Unit	Limit	Result Oct-Dec'21	Result Jan-Mar'22
pH	-	5.5-9.0	7.59	7.46
Chloride	Mg/l	1000	576.12	570.26
Oil & Grease	Mg/l	10.0	BDL	BDL
Total Residual Chlorine	Mg/l	1.0	BDL	BDL
Ammonical Nitrogen	Mg/l	50.0	1.98	2.12
Nitrate Nitrogen	Mg/l	10.0	3.82	4.12
BOD	Mg/l	30	15.40	15.0
COD	Mg/l	250	55.00	52.0
TSS	Mg/l	100	15.80	12.0
Fluoride	Mg/l	2.0	1.06	0.95
Sulphate	Mg/l	1000	578.69	568.46


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Chandaria Lead Zinc Smelter

Annexure - V
HIINDUSTAN ZINC LIMITED

Chandaria Lead Zinc Smelter
Treated Water Monitoring Results
(Oct'21 - March'22)

ETP Outlet – (PYRO)

Parameter	Unit	Limit	Result Oct-Dec'21	Result Jan-Mar'22
Phosphate	Mg/l	5.0	BDL	BDL
Cyanide	Mg/l	0.2	BDL	BDL
Hexavalent Chromium	Mg/l	Not to exceed 0.1	BDL	BDL
Cadmium	Mg/l	2.0	BDL	BDL
Chromium	Mg/l	2.0	BDL	BDL
Copper	Mg/l	3.0	BDL	BDL
Iron as Fe	Mg/l	Not Specified	BDL	BDL
Lead as Pb	Mg/l	0.1	BDL	BDL
Nickel	Mg/l	3.0	BDL	BDL
Zinc	Mg/l	5.00	0.10	0.06



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Chandaria Lead Zinc Smelter


Bearach River Up Stream Report

Chp

Annexure - VI
HINDUSTAN ZINC LIMITED
Chandaria Lead Zinc Smelter
Water Monitoring Results
(Oct'21 - March'22)

Bearach River Down Stream Report


Parameter	Unit	Limit	Result Oct-Dec'21	Result Jan-Mar'22
pH	-	6.5 – 8.5	7.92	8.05
Zinc	Mg/l	15.0	0.238	0.273
Lead	Mg/l	0.1	BDL	BDL
Cadmium	Mg/l	0.01	BDL	BDL
Copper	Mg/l	1.5	BDL	BDL
Iron	Mg/l	5.0	BDL	BDL
Hardness	Mg/l	600	352	336
Chloride	Mg/l	600	127.62	107.76
Sulphate	Mg/l	1000	134.91	118.89
TDS	Mg/l	1500	1236	925


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Chandaria Lead Zinc Smelter

Annexure - VII
Hindustan Zinc Limited
Chandaria Lead Zinc Smelter Complex
Putholi, Chandaria , Dist. Chittorgarh, Rajasthan.

ACID PLANT MONITORING
Quarterly Monitoring (Oct'21 - March'22)

Month Location	Parameters	Prescribed Limits	Result Oct-Dec'21	Result Jan-Mar'22
Acid Plant* (Hydro-1)	SO ₂ (1Kg/T of H ₂ SO ₄ Production) =136 PPM	136 ppm	83.94	90.78
	Acid Mist	30 (mg/nm ³)	3.15	3.60
Acid Plant* (Hydro-2)	SO ₂ (1Kg/T of H ₂ SO ₄ Production) =136 PPM	136 ppm	78.93	82.62
	Acid Mist	30 (mg/nm ³)	1.51	2.31
TGT Stack (Pyro Plant)	SO ₂ (2 Kg/T of H ₂ SO ₄ Production) =224 PPM	224 ppm	132.15	134.45
	Acid Mist	50 (mg/nm ³)	BDL	BDL
Cansolve (Ausmelt Plant)	SO ₂ (2 Kg/T of H ₂ SO ₄ Production) =224 PPM	224 ppm	103.64	104.11
	Acid Mist	50 (mg/nm ³)	5.11	5.27


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 Chandaria Lead Zinc Smelter

Annexure VIII
HINDUSTAN ZINC LIMITED
CHANDERIA LEAD ZINC SMELTER
Ambient Air Quality Monitoring Report (Outside Plant)
Quarterly Monitoring (Oct'21 - March'22)


Month	Parameters	Limit	Result	Result
Village		Unit	Oct-Dec'21	Jan-Mar'22
Putholi	PM-10	100 $\mu\text{g}/\text{m}^3$	75.80	93.80
	PM-2.5	60 $\mu\text{g}/\text{m}^3$	43.08	48.09
	SO ₂	80 $\mu\text{g}/\text{m}^3$	13.94	11.70
	NO _x	80 $\mu\text{g}/\text{m}^3$	32.20	30.14
	Pb	1.0 $\mu\text{g}/\text{m}^3$	0.12	0.93
Mungakakhera	PM-10	100 $\mu\text{g}/\text{m}^3$	63.09	79.15
	PM-2.5	60 $\mu\text{g}/\text{m}^3$	32.29	38.76
	SO ₂	80 $\mu\text{g}/\text{m}^3$	8.65	9.67
	NO _x	80 $\mu\text{g}/\text{m}^3$	19.41	20.11
	Pb	1.0 $\mu\text{g}/\text{m}^3$	BDL	0.61
Nagari	PM-10	100 $\mu\text{g}/\text{m}^3$	59.83	69.41
	PM-2.5	60 $\mu\text{g}/\text{m}^3$	29.60	37.45
	SO ₂	80 $\mu\text{g}/\text{m}^3$	9.52	9.78
	NO _x	80 $\mu\text{g}/\text{m}^3$	18.05	21.02
	Pb	1.0 $\mu\text{g}/\text{m}^3$	BDL	0.69
Biliya	PM-10	100 $\mu\text{g}/\text{m}^3$	54.86	75.76
	PM-2.5	60 $\mu\text{g}/\text{m}^3$	31.51	40.33
	SO ₂	80 $\mu\text{g}/\text{m}^3$	7.26	10.55
	NO _x	80 $\mu\text{g}/\text{m}^3$	21.74	22.22
	Pb	1.0 $\mu\text{g}/\text{m}^3$	BDL	0.75


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Chandaria Lead Zinc Smelter

AjoliyaKaKhera	PM-10	100 $\mu\text{g}/\text{m}^3$	64.86	75.27
	PM-2.5	60 $\mu\text{g}/\text{m}^3$	35.06	35.97
	SO2	80 $\mu\text{g}/\text{m}^3$	9.59	9.75
	NOx	80 $\mu\text{g}/\text{m}^3$	9.81	19.33
	Pb	1.0 $\mu\text{g}/\text{m}^3$	BDL	BDL
Anwalhera	PM-10	100 $\mu\text{g}/\text{m}^3$	73.51	81.16
	PM-2.5	60 $\mu\text{g}/\text{m}^3$	40.82	41.94
	SO2	80 $\mu\text{g}/\text{m}^3$	11.46	10.45
	NOx	80 $\mu\text{g}/\text{m}^3$	29.78	23.26
	Pb	1.0 $\mu\text{g}/\text{m}^3$	BDL	0.72
Zinc Nagar	PM-10	100 $\mu\text{g}/\text{m}^3$	60.21	94.12
	PM-2.5	60 $\mu\text{g}/\text{m}^3$	32.10	50.05
	SO2	80 $\mu\text{g}/\text{m}^3$	9.73	13.48
	NOx	80 $\mu\text{g}/\text{m}^3$	21.55	33.41
	Pb	1.0 $\mu\text{g}/\text{m}^3$	BDL	0.99


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 Chanderia Lead Zinc Smelter


Annexure - IX
HINDUSTAN ZINC LIMITED
Chandaria Lead Zinc Smelter
Ambient Noise Monitoring Results
(Oct'21 - March'22)

Oct'21 – Dec'21

S.No.	Testing Protocol	Parameters	Point of Collection	Observed Value	Observed Value
			Noise Standard(dB)	DAY – 75	Night – 70
1	IS 9989-1981 (RA 2014)	Noise Level (dB)	Near Loco shade C2	71.5	61.1
2	IS 9989-1981 (RA 2014)	Noise Level (dB)	Near Slag gate	74.4	61.7
3	IS 9989-1981 (RA 2014)	Noise Level (dB)	Near DM Plant	73.1	68.9
4	IS 9989-1981 (RA 2014)	Noise Level (dB)	Near CISF Colony C1	66.6	54.5

Jan'22 - March'22

S.No.	Testing Protocol	Parameters	Point of Collection	Observed Value	Observed Value
			Noise Standard(dB)	DAY – 75	Night – 70
1	IS 9989-1981 (RA 2014)	Noise Level (dB)	Near Loco shade C2	69.4	57.9
2	IS 9989-1981 (RA 2014)	Noise Level (dB)	Near Slag gate	71.1	60.2
3	IS 9989-1981 (RA 2014)	Noise Level (dB)	Near DM Plant	72.3	67.8
4	IS 9989-1981 (RA 2014)	Noise Level (dB)	Near CISF Colony C1	61.4	50.6


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 Chandaria Lead Zinc Smelter


Annexure - X
HINDUSTAN ZINC LIMITED
Chandaria Lead Zinc Smelter
Ambient Air Quality (CAAQM) Report

Direction West	CAAQMS NO.1 Near C1 Office							
	LOCATION							
	Parameter	Standard of AAQ	Oct'22	Nov'22	Dec'22	Jan'22	Feb'22	Mar'22
	PM 10	100	65	76	73	78	75	77
	SOX	80	26.30	33.80	25.28	24.91	24.12	35.50
	NOX	80	13.7	20.7	21.8	19.8	21.2	27.1

Direction East	CAAQMS NO.2 DM Plant – CPP							
	LOCATION							
	Parameter	Standard of AAQ	Oct'22	Nov'22	Dec'22	Jan'22	Feb'22	Mar'22
	PM 10	100	40	58	47	48	56	68
	SOX	80	24.0	20.2	20.5	20.8	15.1	28.3
	NOX	80	7.1	10.8	9.5	10.4	12.0	18.0

Direction South	CAAQMS NO.3 Chittorgarh Fort							
	LOCATION							
	Parameter	Standard of AAQ	Oct'22	Nov'22	Dec'22	Jan'22	Feb'22	Mar'22
	PM 10	100	77	79	76	79	83	85
	SOX	80	9.4	9.2	9.5	9.0	10.0	10.9
	NOX	80	26.6	25.8	24.9	22.3	24.4	22.8


Direction North	CAAQMS NO.4 Pond No 1 (New Station)							
	LOCATION							
	Parameter	Standard of AAQ	Oct'22	Nov'22	Dec'22	Jan'22	Feb'22	Mar'22
	PM 2.5	60	19	30	28	29	23	30
	PM 10	100	47	56	47	62	63	71
	SOX	80	14.8	14.9	15.8	15.8	18.3	26.6
	NOX	80	5.5	8.7	16.3	11.2	5.3	19.4


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 Environment Head
 Chandaria Lead Zinc Smelter

Annexure - X
HINDUSTAN ZINC LIMITED
Chandaria Lead Zinc Smelter
Ambient Air Quality (CAAQM) Report

Direction
South


CAAQMS NO.5 Railway Yard (New Station)							
LOCATION							
Parameter	Standard of AAQ	Oct'22	Nov'22	Dec'22	Jan'22	Feb'22	Mar'22
PM 2.5	60	32	43	44	40	30	29
PM 10	100	45	83	83	78	72	72
SOX	80	44.8	49.2	55.4	48.0	35.6	52.4
NOX	80	23.2	40.9	21.5	16.7	7.6	17.7


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 Chandaria Lead Zinc Smelter

Annexure - XI
HINDUSTAN ZINC LIMITED

Chandaria Lead Zinc Smelter
(Piezometer Results Oct'21 – Dec'21)


S.NO.	Location	PH	Zn	Pb	Cd	Hardness	Chloride	Sulphate	TDS
	Limit- (IS : 10500)	6.5-8.5	5.0-15.0	0.01	0.003	200-600	250-1000	200-400	500-2000
1	PzBorrewell - 1	7.14	0.02	BDL	BDL	438.83	73.17	68.15	987
2	PzBorrewell - 2	7.60	0.03	BDL	BDL	459.23	43.91	68.87	960
3	PzBorrewell - 3	6.71	2.05	BDL	BDL	578.51	287.82	364.30	1909
4	PzBorrewell - 4	7.07	0.19	0.01	BDL	418.41	112.20	137.38	1051
5	PzBorrewell - 5	7.12	0.15	0.01	BDL	367.39	107.33	126.59	873
6	PzBorrewell - 6	7.35	0.02	BDL	BDL	530.67	112.20	144.22	1012
7	PzBorrewell - 7	7.09	0.04	BDL	BDL	386.65	82.93	143.14	870
8	PzBorrewell - 8	7.41	0.09	BDL	BDL	513.32	141.47	140.62	1183
9	PzBorrewell - 9	6.91	0.08	BDL	BDL	295.95	107.33	57.91	647
10	PzBorrewell - 10	6.80	0.10	BDL	BDL	500.05	48.79	147.82	1103
11	PzBorrewell - 11	7.21	0.86	BDL	BDL	285.74	97.56	122.28	705
12	PzBorrewell - 12	7.31	0.84	BDL	BDL	306.15	97.56	112.93	702
13	PzBorrewell - 13	7.47	0.12	BDL	BDL	377.60	87.81	104.65	818
14	PzBorrewell - 14	7.11	0.03	BDL	BDL	275.54	51.22	110.09	680
15	PzBorrewell - 15	7.25	0.09	BDL	BDL	510.26	156.12	139.55	1057
16	PzBorrewell - 16	7.27	0.07	0.01	BDL	499.36	126.84	144.58	1111
17	PzBorrewell - 17	7.22	0.02	BDL	BDL	500.05	156.10	136.30	1026
18	PzBorrewell - 18	7.15	0.03	BDL	BDL	459.14	87.81	115.44	887


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Chandaria Lead Zinc Smelter

Annexure - XI
HINDUSTAN ZINC LIMITED


Chandaria Lead Zinc Smelter
(Piezometer Results Jan'22 – March'22)

S.NO.	Location	PH	Zn	Pb	Cd	Hardness	Chloride	Sulphate	TDS
	Limit- (IS : 10500)	6.5-8.5	5.0-15.0	0.01	0.003	200-600	250-1000	200-400	500-2000
1	PzBorrewell - 1	7.24	0.02	BDL	BDL	445.62	76.24	70.12	997
2	PzBorrewell - 2	7.45	0.04	BDL	BDL	449.57	40.24	64.25	950
3	PzBorrewell - 3	6.94	1.87	BDL	BDL	567.18	282.31	358.17	1876
4	PzBorrewell - 4	7.18	0.15	BDL	BDL	425.16	118.24	142.21	1068
5	PzBorrewell - 5	7.20	0.10	BDL	BDL	374.25	112.34	130.24	881
6	PzBorrewell - 6	7.25	0.06	BDL	BDL	537.45	115.24	148.24	1026
7	PzBorrewell - 7	6.98	0.06	BDL	BDL	369.59	78.26	138.24	854
8	PzBorrewell - 8	7.34	0.05	BDL	BDL	498.24	138.24	132.45	1172
9	PzBorrewell - 9	7.02	0.09	BDL	BDL	304.12	112.31	60.21	662
10	PzBorrewell - 10	6.97	0.12	BDL	BDL	495.64	45.21	146.35	1087
11	PzBorrewell - 11	7.26	0.79	BDL	BDL	290.31	96.21	124.26	719
12	PzBorrewell - 12	7.40	0.80	BDL	BDL	312.45	100.24	116.28	716
13	PzBorrewell - 13	7.39	0.10	BDL	BDL	370.26	84.54	99.78	798
14	PzBorrewell - 14	7.16	0.05	BDL	BDL	280.46	56.78	112.36	702
15	PzBorrewell - 15	7.32	0.10	BDL	BDL	501.58	152.47	134.0	1050
16	PzBorrewell - 16	7.20	0.10	BDL	BDL	490.25	122.36	140.35	1098
17	PzBorrewell - 17	7.29	0.08	BDL	BDL	492.79	152.16	132.59	1018
18	PzBorrewell - 18	7.23	0.09	BDL	BDL	448.26	84.64	110.27	876


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 Chandaria Lead Zinc Smelter

Annexure -XII
Hindustan Zinc Ltd
Chandaria Lead Zinc Smelter
(CEMS)

S.No.	Stations	Parameter	Prescribed Standard	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22
1	CPP Unit-1 and 2	SPM	50.0 (mg/Nm ³)	14.58	25.73	23.79	11.32	18.44	13.41
2	CPP Unit-3	SPM	50.0 (mg/Nm ³)	PSD	45.03	23.5	13.99	15.78	38.34
3	Hydro1 Acid Plant	SO ₂	136 (ppm)	88.73	91.46	84.44	79.36	90.59	92.7
4	Hydro1 Zinc Dross	SPM	30.0 (mg/Nm ³)	14.54	19.24	19.79	19.81	20.07	18.26
5	Hydro1 Zinc Dust	SPM	30.0 (mg/Nm ³)	13.16	11.72	11.26	10.5	10.87	11.37
6	Hydro1 Zinc Melting Furnace 1	SPM	30.0 (mg/Nm ³)	17.86	18.99	14.19	13.16	13	11.99
7	Hydro1 Zinc Melting Furnace 2	SPM	30.0 (mg/Nm ³)	10.35	12.88	10.4	13.17	20.79	21.27
8	Hydro2 Acid Plant	SO ₂	136.0 (ppm)	99.79	104.2	92.27	86.13	109.47	102.31
9	Hydro2 Zinc Dross	SPM	30.0 (mg/Nm ³)	15.05	22.84	2.19	8.49	1.13	8.59
10	Hydro2 Zinc Dust	SPM	30.0 (mg/Nm ³)	22.02	24.68	24.67	10.7	14.25	18.65
11	Hydro2 Zinc Melting Furnace	SPM	30.0 (mg/Nm ³)	14.16	4.99	11.69	9.9	9.56	15.71


Tarun Kumar Meghwal
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 Chandaria Lead Zinc Smelter

Annexure -XIII
Hindustan Zinc Ltd
Chandaria Lead Zinc Smelter
(Noise Mapping)

NOISE MAPPING REPORT



PREPARED FOR
HINDUSTAN ZINC LTD.

*Village- Phutholi, Tehsil-Gangrar, Chittorgarh
(Rajsthan)*

PREPARED BY
JM EnviroNet Pvt.Ltd.

Consulting Engineers, Scientists & Trainers NABET Accredited EIA Consultants
An ISO: 9001:14001 & 45001:1 Certified Organization

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Annexure -XIII
Hindustan Zinc Ltd
Chandaria Lead Zinc Smelter
(Noise Mapping Report)

NOISE MAPPING			
Table 6.oResults showing Noise level in surrounding areas			
S.No.	Area	Location	Measured Value in dB(A)
1.	Industrial Area	Main Gate	59.91
2.		Near Fire Station	69.38
3.		Near Employee Canteen	66.39
4.		Central Laboratory	68.6
5.		Fire Storage Tank	60.57
6.		CPP	64.19
7.		Slag Gate	66.49
8.		Near SLF Area	62.98
9.		Loco Shed	63.68
10.		Near Plant Boundary	60.13
11.		Near Main Gate	53.01
12.		1.5 km East Direction	55.2
13.		1.5 km North Direction	57.41
14.		1.5 km South Direction	58.18
15.		Near NH Road West Direction	60.1

Annexure -XIV
Hindustan Zinc Ltd
Chanderia Lead Zinc Smelter
(Green Cover Study Report)



STATE REMOTE SENSING APPLICATION CENTRE
DEPARTMENT OF SCIENCE & TECHNOLOGY
GOVERNMENT OF RAJASTHAN

F(JDS/RSAC/CHANDERIYA-GREEN-COVER/2021 / 754

Date: 25 Mar 2021

To,

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Deputy Manager – Environment,
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e-mail: manisha.bhati@vedanta.co.in
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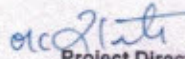
SUB.: Final Report for Green Cover Study of Chanderiya Lead Zinc Smelter Complex at Chittorgarh Rajasthan.

REF.: Purchase Order 4500006323 dated 19 Jan 2021

Ma'am,

With the above reference, please find enclosed the final report of green cover assessment for the study area with the results derived using IRS-Cartosat-2E and ESA-Sentinel-2 satellite imageries.

With regards,



Project Director
cum Deputy Secretary
SRSAC, DST, Jodhpur

F(JDS/RSAC/CHANDERIYA-GREEN-COVER/2021 / 754-55

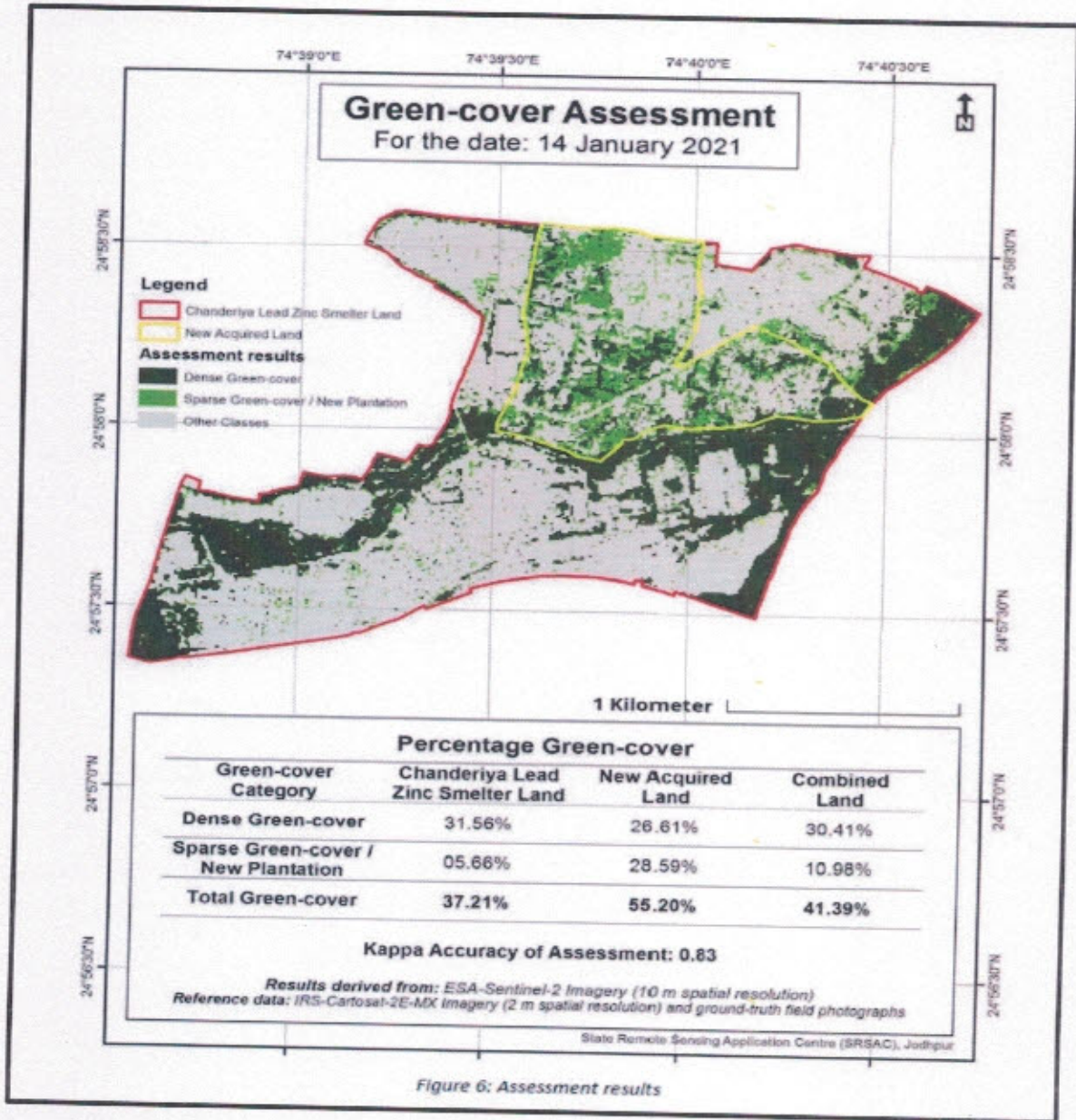
Date: 25 Mar 2021

Copy to:

PS to Secretary, DST, GOR, Japur


Project Director
cum Deputy Secretary
SRSAC, DST, Jodhpur

Annexure -XIV
Hindustan Zinc Ltd
Chanderia Lead Zinc Smelter
(Green Cover Study Report)



Green Cover Snapshots






Annexure -XV
Hindustan Zinc Ltd
Chandaria Lead Zinc Smelter
Photographs of Vaccum Roadsweeper




Annexure -XVI
Hindustan Zinc Ltd
Chandaria Lead Zinc Smelter



HINDUSTAN ZINC

A Vedanta Company



Health, Safety & Environment (HSE) Policy

Hindustan Zinc is committed to conduct all business activities in a responsible manner, which ensures the health and safety of our stakeholders and the environment. In order to achieve that, we shall:

- Ensure Zero Harm to personnel and environment.
- Demonstrate visible HSE leadership that HSE is our core value.
- Comply with all HSE rules, regulations, obligations and requirements and will strive to go beyond compliance to the relevant requirements and shall continually improve our HSE management systems.
- Incorporate appropriate HSE Criteria¹ for all business decisions for selection of plant, technology, contractors and personnel.
- Identify and evaluate HSE risks for all activities² and take actions to eliminate/mitigate risks and hazards.
- Encourage, train, equip and empower personnel, including contractors & contract employees, to adopt a healthy and safe working approach both on and off the job. The HSE performance of individual personnel shall decide his career advancement.
- Conserve natural resources and eliminate waste through reduction, recycling and reuse methods, which are environment-friendly and energy-efficient.







Health, Safety & Environment (HSE) Guiding Principles:


- Management shall demonstrate its strong commitment towards HSE at all times.
- All injuries, occupational illnesses and adverse environmental incidents are preventable.
- Reporting and investigation of all incidents is an obligation.
- We are responsible and accountable for preventing injuries, occupational illnesses and adverse environmental incidents.
- We are empowered and obligated to stop any job being carried out in an unsafe manner.
- HSE values shall never be compromised.
- Adherence to HSE management system is a condition of employment.

We personally commit to applying the policy & principles for building positive HSE culture at Hindustan Zinc and report wherever applicable.

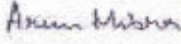
1- These criteria are applicable to the product distribution and logistics/entry product life cycle from extraction to product distribution and logistics.

2- The policy is not only applicable to our existing operational sites/new projects but also all the downstream, mergers and acquisitions and joint managed operations / business / third party manufacturers / joint ventures / outsourcing partners.



Date: 1st August, 2020



Arun Misra
 CEO, Hindustan Zinc

www.hzindia.com